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Таблицы

ЛОГАРИѲМОВЪ

Вестфаля.

Изданныя съ пополненіемъ другихъ таблицъ

Гидрографическимъ Депо Главнаго Морскаго Штаба

ЕГО ИМПЕРАТОРСКАГО ВЕЛИЧЕСТВА.

САНКТПЕТЕРБУРГЪ.

Въ Морской Типографіи

1834 года.

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ОГЛАВЛЕНІЕ

Изъясненіе Таблицъ.

I. Таблица Логариѳмовъ чиселъ отъ 1 до 10800.

II. Таблица Логариѳмовъ Тригонометрическихъ линій для четверти окружности, чрезъ каждую минуту градуса.

III. Таблица для вычисленія Логариѳма суммы или разности двухъ чиселъ извѣстныхъ единственно по ихъ Логариѳмамъ.

IV. Таблица квадратныхъ чиселъ отъ 1 до 1000.

V. Таблица квадратныхъ корней отъ 1 до 1000.

VI. Таблица кубичныхъ чиселъ отъ 1 до 1000.

VII. Таблица кубичныхъ корней отъ 1 до 100.

VIII. Таблица хордъ отъ 0° до 90° отъ 10′ до 10′.

IX. Таблица настоящихъ Синусовъ, Тангенсовъ и Секансовъ отъ 0° до 90° отъ 10′ до 10′.

Таблицы Логариѳмовъ

ВЕСТФАЛЯ.

РАСПОЛОЖЕНІЕ И УПОТРЕБЛЕНІЕ ТАБЛИЦЪ.

ТАБЛИЦА I.

1.

Сія таблица содержитъ въ себѣ Бригговы логариѳмы всѣхъ цѣлыхъ чиселъ отъ 1 до 10000 съ пятью, а отъ 10000 до 10800 съ шестью десятичными, но безъ характеристикъ. На первой страницѣ находятся числа отъ 1 до 420 и рядомъ съ ними принадлежащіе къ нимъ Логариѳмы; но со слѣдующей страницы и до конца, устроеніе таблицы сложнѣе. Столбецъ O содержитъ Логариѳмъ числа находящагося въ тойже строкѣ въ столбцѣ N; столбцы 1, 2, 3, ... 9 логариѳмы числа, которое найдется, когда къ находящемуся въ столбцѣ N числу присоединятся съ правой руки цыфры 1, 2, 3, ... 9. Для сихъ послѣднихъ Логариѳмовъ показаны однакоже только три послѣднія десятичныя, поелику двѣ первыя, кои для множества послѣдовательныхъ Логариѳмовъ остаются тѣже, найдутся въ столбцѣ O. Когда здѣсь оставлено пустое мѣсто, то должно брать ближайшія верхнія цыфры; когдаже предъ сысканными тремя десятичными означена звѣздочка, то ближайшія ниже слѣдующія цыфры. Столбецъ P.P. даетъ пропорціональныя части для пяти цыфръ даннаго числа; цѣлыя сихъ пропорціональныхъ частей относятся до послѣднихъ десятичныхъ цыфръ Логариѳмовъ.

Каждая страница содержитъ сверьхъ того обращеніе въ градусы, минуты и секунды чиселъ столбца N, приставляя къ онымъ съ правой руки нуль и принимая оныя за секунды. Если вмѣсто нуля будетъ приставлено иное число, то къ найденному числу градусовъ, минутъ и секундъ должно придать столько секундъ, сколько приставленное число содержитъ единицъ.

Находящіяся внѣ рамки каждой страницы числа N и L, суть начальныя цыфры перваго числа и его Логариѳма на сей страницѣ чѣмъ облегчается пріисканіе Логариѳмовъ.

Объясненіе чиселъ S, T, V, и столбца *Corr.* находится на страницѣ IX.

2.

Чтобы къ данному цѣлому числу прибрать Бригговъ Логариѳмъ съ пятью десятичными, должно различить три случая: находится ли данное число между 1 и 420, или между 420 и 10000, или же оно болѣе 10000. Въ первомъ случаѣ Логариѳмъ сыщется на первой страницѣ непосредственно возлѣ числа, и останется только придать соотвѣтственную характеристику. Напр:

log 8 = 0,90309
log 91 = 1,95904
log 397 = 2,59879

Во второмъ случаѣ пріискивается число, за исключеніемъ послѣдней цыфры справа, въ столбцѣ N; и ниже строкѣ въ началѣ столбца O найдутся двѣ первыя десятичныя, а въ столбцѣ означенномъ послѣднею цыфрою числа двѣ послѣднія, кои соединя и придавъ характеристику получимъ искомый Логариѳмъ. На прим:

log 1324 = 3,12189
log 3084 = 3,48911
log 3637 = 3,56074

Въ третьемъ случаѣ находятъ Логариѳмъ первыхъ четырехъ цыфръ заданнаго числа, какъ объяснено выше, но безъ характеристики; потомъ берутъ разность между симъ Логариѳмомъ и ближайшимъ большимъ, и на сію разность и на пятую цыфру числа сыскиваютъ въ столбцѣ P.P. пропорціональную часть, которая къ прежде найденному Логариѳму придается. Если число содержитъ больше пяти цыфръ, то для шестой берется десятая, для седьмой сотая часть показанной пропорціональной части, кои къ сысканному Логариѳму также придаются; восьмая и слѣдующія цыфры (обыкновенно уже и седьмая) на пропорціональныя части болѣе вліянія не имѣютъ. Къ полученному такимъ образомъ Логариѳму должно еще придать потребную характеристику. На прим:

Чтобы найти log 89038, мы имѣемъ

log 8903 = . . . , 94954
Проп. ч. на 5-ю цыфру 8 = 4 при разности 5
получаемъ log 89038 = 4,94958.

Подобнымъ образомъ для log 786537

log 7865 = . . . , 89570
Проп. ч. на 5-ю цыфру 3 = 1,5
——— — 6-ю ——— 7 = 0,3 } при разности 5
Посему log 786537 = 5,89572.

Наконецъ для log 2345685

log 2345 = . . . , 37014
Проп. ч. на 5-ю цыфру 6 = 11,4
———— 6 ——— 8 = 1,5
———— 7 ——— 5 = 0,1 } при разности 19
По сему log 2345685 = 6,37027

Пріискиваніе Логариѳмовъ простыхъ и десятичныхъ дробей производится такимъ же образомъ какъ и цѣлыхъ чиселъ.

3.

Для пріисканія къ Бриггову Логариѳму съ пятью десятичными соотвѣтствующаго числа, ищутъ вопервыхъ въ столбцѣ 0 двухъ первыхъ десятичныхъ Логариѳма; если и при послѣднія тутъ же случатся, то находящееся въ столбцѣ N въ тойже строкѣ число есть искомое; будеже нѣтъ то смотри онаго въ столбцахъ 1, 2, 3, ... 9, въ тойже самой строкѣ, или въ слѣдующихъ, или же между означенными звѣздочками цыфрами предъидущей строки. Изъ той строки, гдѣ оныя цыфры найдены, выбирается находящееся въ столбцѣ N число, и присоединяется еще къ оному цыфра которою означенъ столбецъ, содержавшій при послѣднія десятичныя. Если число цыфръ въ найденномъ такимъ образомъ числѣ не соотвѣтствуетъ характеристикѣ Логариѳма, то или отдѣляется въ ономъ занятою десятичная дробь отъ цѣлаго числа, или же приставляется сколько нужно нулей, дабы получить соотвѣтствующее Логариѳму число. Такъ на прим:

Num. log 2,77305 = 593
Num. log 1,69329 = 49,35
Num. log 5,74076 = 550500

Весьма рѣдко случается чтобы послѣднія при десятичныя пашлись подъ цѣло въ которомъ нибудь столбцѣ; въ такомъ случаѣ вычитается ближайшій меньшій Логариѳмъ таблицы изъ даннаго, и ищутъ въ столбцѣ P.P. какому числу при извѣстной разности между Логариѳмами соотвѣтствуетъ сей остатокъ, и присоединяютъ сію пропорціональную часть къ числу соотвѣтствующему оному ближайше меньшему Логариѳму, какъ пятую цыфру. Если помянутый остатокъ не найдется подъ цѣло между пропорціональными частями, то берется вмѣсто его ближайше меньшая пропорціональная часть и соотвѣтствующая ей цыфра; избытокъ остатка предъ сею пропорціональною частію множится на десять, и ищется опять соотвѣтствующая сему произведенію цыфра, которая дѣлается шестою искомаго числа, и т: д: однако уже и въ сей шестой цыфрѣ бываетъ почти всегда неизвѣстность на одну или многія единицы; и потому на мѣста слѣдующихъ цыфръ, если характеристика заданнаго Логариѳма оныхъ требуетъ, должно брать нули. На прим.

Для сысканія Num. log. 2,61735, имѣемъ

Num. log. 2,61731 = 414,3, и въ остаткѣ 4
Проп. ч. на 4 при разности 11 даетъ 5-ю цыфру = 3, и въ остаткѣ 0,7
Проп. ч. на 7, при разности 11 даетъ 6-ю цыфру = 6

Откуда Num. log. 2,61735 = 414,336.

Подобнымъ образомъ для Num. log 7,24073 имѣемъ вопервыхъ

Num. log. 7,24055 = 1740 .... а въ остаткѣ 18
Проп. ч. на 18 при разности 25 даетъ 5-ю цыфру = 7 ... и остатокъ 0,5
Проп. ч. на 5 при разности 25 даетъ 6-ю цыфру = 2.

Num. log. 7,24073 = 17407200.

ТАБЛИЦА II.

4.

Вторая таблица содержитъ Бриггсовы Логарифмы Синовъ и Тангенсовъ, а посему и Косиновъ и Котангенсовъ для всѣхъ градусовъ четверти круга, съ пятью десятичными; градусы отъ 0° до 45° означены вверху, а дополненія ихъ отъ 90° до 45° внизу тѣхъ же страницъ. Къ верхнимъ градусамъ принадлежатъ минуты находящіяся въ вертикальномъ столбцѣ по лѣвую сторону, означенномъ запятою, и считающіяся отъ верху къ низу; а для нижнихъ градусовъ въ подобномъ столбцѣ по правую сторону, слѣдующія съ низу къ верху. Для первыхъ а посему и для послѣднихъ шести градусовъ означены аргументы угловъ чрезъ каждыя десять секундъ; отъ седьмаго же и отъ 83 градуса до конца таблицы чрезъ минуту. Чрезъ всю таблицу показаны подлѣ каждаго столбца Синовъ и Тангенсовъ разности между послѣдовательными Логарифмами; у Косиновъ же первыхъ градусовъ разности не означены по причинѣ малости оныхъ; разности Котангенсовъ всегда равны разности Тангенсовъ. Столбцы. P.P. содержатъ пропорціональныя части на секунды для каждой разности.

5.

Для прибранія къ данному въ Градусахъ, Минутахъ и Секундахъ углу Логарифма потребной тригонометрической линіи различаются два случая: принадлежитъ ли заданный уголъ къ первымъ (или послѣднимъ) шести градусамъ четверти круга, или нѣтъ. Въ первомъ случаѣ выбирается Логарифмъ на Градусы, Минуты и десятки секундъ даннаго угла прямо изъ таблицы и придается къ нему десятая доля произведенія показанной возлѣ разности на единицы секундъ; сумма даетъ требуемый Логарифмъ. На прим. если спрашивается log 0°. 52′ 27″., то

$$\log \text{Sin } 0°.\ 52'.\ 20''. = 8{,}18249$$
$$\frac{138 \times 7}{10} = 97$$
$$\log \text{Sin } 0°.\ 52'.\ 27''. = 8{,}18346.$$

Подобнымъ образомъ log Tang 89°. 12′. 48″=1,86230. Во второмъ случаѣ когда данный уголъ приходится между 6° и 84°, Логарифмъ требуемой тригонометрической линіи найдется непосредственно только на градусы и минуты; пропорціональная же часть на заданное число секундъ по означенной между Логарифмами разности сыскивается въ столбцѣ P.P. и придается или вычитается отъ выбраннаго прежде Логарифма, смотря потому меньше оный или больше слѣдующаго за нимъ. На прим. пусть спрашивается log Tang 41°. 17′. 35″, мы имѣемъ.

$$\log \text{Tang } 41°.\ 17' = 9{,}91350$$
Проп. ч. на 35″. при разности 25 = +15.

Откуда log Tang 41°. 17′. 35″ = 9,91365.

Подобнымъ образомъ log Cos 39°. 14′. 35″. = 9,88900.

6

Прибирая къ данному Логариѳму тригонометрической линіи принадлежащій уголъ, ищутъ сего Логариѳма въ столбцѣ той линіи, и буде онъ найдется тутъ подъ цѣло, получится прямо и искомый уголъ. Въ противномъ случаѣ придется онъ между двумя смѣжными Логариѳмами; и тогда выбирается вопервыхъ меньшій изъ соотвѣтствующихъ симъ двумъ Логариѳмамъ угловъ; оный получится въ Градусахъ, Минутахъ и десяткахъ секундъ, если заключается въ первыхъ или послѣднихъ шести градусахъ четверти круга, въ противномъ же случаѣ только въ градусахъ и минутахъ. Чтобы въ первомъ случаѣ прибрать единицы секундъ, множится разность между выбраннымъ и заданнымъ Логариѳмомъ на десять и произведеніе дѣлится на разность между обѣими табличными Логариѳмами; во второмъ же случаѣ по онымъ двумъ разностямъ найдется въ столбцѣ P.P. прямо число секундъ На прим: мы находимъ непосредственно

Уголъ log Tang 8,22469 = 0°. 57′. 40″.
Уголъ log Cos 9,47330 = 72°. 42′. 00″.

Принадлежащій же къ log. Tang. 67769 уголъ найдется такъ:

Уголъ log Tang. 8,67757 = 2°. 43′. 30″.

$$\frac{12\times10}{44} = 3.$$

Откуда уголъ log Tang 8,67769 = 2°. 43′. 33″.

Подобнымъ образомъ находимъ уголъ log Cotg 8,20894 = 89°. 4′. 23″.

Къ log. Sin. 9,86598 найдемъ соотвѣтственный уголъ

Уголъ log Sin 9,86589 = ...47°. 15′
На разность 11 и проп. ч.....9 = ... 49″.

Откуда уголъ log Sin 9,86598 = ...47°. 15′. 49″.

Подобнымъ же образомъ

Уголъ log. Sin. 9,83677 = 43°. 22′. 13″.
Уголъ log. Cos. 9,88645 = 39. 39. 02.
Уголъ log. Tang 0,03525 = 47. 19. 21.
Уголъ log. Cotg 9,93036 = 49. 34. 27.

7.

Съ помощію первой таблицы изъ Логариѳма Тригонометрической линіи даннаго угла находится самая сія линія, и обратно по данной линіи, Логариѳмъ оной и отсюда соотвѣтствующій уголъ на прим:

Tang 41°. 17′. 35″. = Num. log. 9,94365 = 0,87832.
Уголъ Cotg. 0, 85184 = уг. log. Cotg. 9,93036 = 49°.54′. 27″.

8.

Для угловъ близкихъ къ началу или концу четверти круга, бываетъ интерполяція нѣсколько неудобна, по причинѣ великихъ разностей; въ такомъ случаѣ можно съ выгодою употребить показанныя въ первой таблицѣ числа S, T, V, и столбецъ Corr. числа S и T, приданныя къ Логариѳму перваго числа каждой страницы, даютъ Логариѳмъ Сина или Тангенса числа секундъ, онымъ первымъ числомъ выраженнаго; на прим.

log Sin 0°.27′.0″.=log Sin 1620″ = S + log 1620 = 4,68557 + 3,20952 = 7,89509.
log Tang 0°.57′.0″.=log Tang 3420″ = T + log 3420 = 4,68561 + 3,53403 = 8,21964.

Для пріисканія же къ каждому изъ находящихся на страницѣ чиселъ принимая оныя за секунды, соотвѣтственныхъ величинъ S и T, служитъ столбецъ Corr. и означенное надъ нимъ число V. Въ столбцѣ семъ показана для каждой изъ цѣлыхъ минутъ, заключенныхъ во встрѣчающемся на той страницѣ числѣ секундъ, а чрезъ интерполяцію и для каждой секунды, поправка, которая для Сина будучи вычтена изъ числа V, а для Тангенса придана къ оному, даетъ величины S и T, на прим. Для Sin 1°. 9′. поправка есть 29, которую должно вычесть изъ V чтобы получить S=4,685546: для Tang 2°. 31′. 13″ находимъ поправку 280, которую придавъ къ V, получаемъ T = 4,685855. Числа сіи сыщутся легче, хотя и не столь точно: (что впрочемъ на выводъ никакаго почти вліянія имѣть не можетъ, поелику S и T прибираются съ шестью десятичными:) если вмѣсто того чтобы соотвѣтствующую минутамъ и секундамъ поправку вычитать изъ V или придавать къ V, разность между сею сысканною и первою на той же страницѣ находящеюся поправкою вычтена будетъ изъ показаннаго вверху страницы S или придана къ T. Для выше приведенныхъ примѣровъ будетъ при Sin 1° 9′ разность между поправками 29 — 28 = 1, которую вычтя изъ S=4,685547 получимъ величину S=4,685546; при Tang 2°. 31′. 13″ разность есть 280 — 265 = 15, которую должно приложить къ T = 4,685840, чтобы получить новую величину T = 4,685855.

Желая сыскать Логариѳмъ Сина или Тангенса какаго нибудь угла между 0° и 3°, должно къ пріисканному S или T придать Логариѳмъ числа секундъ въ углѣ содержимыхъ. На прим. Для log. Sin. 1°. 9′. = log. Sin. 4140″ имѣемъ

S = 4,68555
log 4140 = 3,61700
log Sin 1°.9′.0″ = 8,30255

Для log Tang 2°. 31′. 13″,3 = log Tang 9073″,3,
T = 4,685855
log 9073,3 = 3,957765
log Tang 2°. 31′. 13″,3 = 8,643620

Если ищется Логариѳмъ Косина или Котангенса угла между 87° и 90°, то вмѣсто его берется описаннымъ выше образомъ Логариѳмъ Сина или Тангенса дополненія онаго до 90°; еслижъ Логариѳмъ Тангенса угла между 87° и 90°, то должно взять Ариѳметическое дополненіе Логариѳма Тангенса дополненія того угла до 90°.

При обращеномъ вопросѣ: къ данному Логариѳму Сина или Тангенса пріискать соотвѣтствующій уголъ, лежащій между 0° и 3° или 87° и 90°, вычитаютъ изъ даннаго Логариѳма число 4,685 и въ столбцѣ O первой таблицы пріискиваютъ ближайшій меньшій Логариѳмъ, къ коему принадлежащее число, принятое за секунды, даетъ приближенно искомый уголъ; прибранное къ сему углу число S или T вычитается изъ заданнаго Логариѳма и къ остатку, принятому за Логариѳмъ, пріискивается наконецъ соотвѣтствующее число, дающее съ достаточною точностію искомый уголъ. На прим. спрашивается уголъ соотвѣтствующій log Tang = 8,64362. — Имѣемъ 8,64362 — 4,685 = 3,95862,

и соотвѣтствующее тому число 9091″, для котораго T = 4,685855; за симъ 8,64362 — 4,685855 = 3,9577765, которому Логарифму принадлежитъ число 90733 или уголъ 2°. 31′. 13″, 3.

9.

Употребленіе чиселъ S и T не весьма удобно, когда Аргументы угловъ, какъ во второй таблицѣ, слѣдуютъ чрезъ каждыя 10″; по столбецъ Corr. можетъ быть съ пользою употребленъ во всѣхъ Тригонометрическихъ вычисленіяхъ, гдѣ изъ даннаго угла требуется вывесть посредствомъ какой нибудь формулы другой малый уголъ, какъ сіе часто встрѣчается въ Астрономіи. Въ семъ случаѣ число U совсемъ пренебрегается; вмѣсто Логарифма Синя или Тангенса угла или дуги берется Логарифмъ числа секундъ въ оныхъ содержащихся, и исправляется оный приложеніемъ поправки изъ столбца Corr. которая какъ выше объяснено изъ Синя вычитается а къ Тангенсу придается. Если потомъ къ выведенному изъ формулы числу, какъ Логарифму Синя или Тангенса малаго угла, потребуется прибрать самый сей уголъ, то выбирается вопервыхъ принадлежащее оному Логарифму число, принимается за секунды и обращается въ градусы, минуты и секунды; потомъ соотвѣтствующая сему углу поправка придается къ данному Логарифму если ищется Синъ, если же Тангенсъ, то вычитается; и на конецъ къ исправленному такимъ образомъ Логарифму пріискивается соотвѣтствующее число секундъ или искомый уголъ Изъ показанныхъ у поправокъ въ столбцѣ Corr. двухъ знаковъ верхній принимается когда спрашивается Логарифмъ Синя или Тангенса даннаго угла, въ противномъ же случаѣ нижній. На прим: Да будетъ формула Tang p = N. Sin π, въ которой даны π = 54′. 41″,75 и Log N = 9,87041, и ищется уголъ p. Мы имѣемъ Log π = Log 54′ 41″,75 = Log 3281″,75 = 3,516107; поправка на 54′ 42″ есть — 19 единицъ шестой десятичной. По сему Log Sin π = 3,516088, а Log Tang p = 3,516088 + 9,87041 = 3,38650; отсюда p = 40′ 35″, а поправка на Тангенсъ для сего угла = — 20 единицъ шестой десятичной. Слѣдовательно исправленный Логарифмъ будетъ = 3,38648, а принадлежащій къ оному уголъ p = 40′ 34″, 89.

ТАБЛИЦА III. (*)

10.

Посредствомъ сей третьей Таблицы находится изъ данныхъ Логарифмовъ двухъ чиселъ Логарифмъ суммы или разности оныхъ. Первый чрезъ A означенный столбецъ сей таблицы содержитъ всѣ тысячныя доли отъ 0 до 2, всѣ сотыя доли отъ 2 до 3, 4, и всѣ десятыя отъ 3, 4 до 5, 0; столбцы B и C имѣютъ неравныя, въ возлѣ стоящихъ столбцахъ показанныя, разности. Столбцы P. P. при A, B и C содержатъ пропорціональныя части.

(*) Таблица сія вычислена Кавалеромъ Гауссомъ, и съ позволенія его извлечена изъ мѣсячной переписки Барона Цара.

11.

Чтобы изъ данныхъ Логариѳмовъ двухъ величинъ a и b найти Логариѳмъ суммы ихъ a + b, возьми вопервыхъ разность между данными Логариѳмами; потомъ log $a \backsim$ log b пріищи въ столбцѣ A, и возьми соотвѣтствующее число въ столбцѣ B, и будетъ.

$$\log (a+b) = \log a + \mathrm{B}.$$

log a — log b показаны въ столбцѣ A за исключеніемъ двухъ послѣднихъ цифръ; на сіи цыфры и на показанную противу B разность пріищи поправку въ находящемся возлѣ A, столбцѣ P. P. и вычти оную изъ найденной въ столбцѣ B для первыхъ трехъ цыфръ A величины. На прим: чтобы изъ log $a = 0{,}36173$ и log $b = 0{,}23045$ найти Логариѳмъ суммы, ищу log a — log b $= 0{,}13128$ въ столбцѣ A, и имѣю

Для A = 0,131	B = 0,24045
Проп. ч. на 28, при разности 42 . =	— 12
По сему для A = 0,13128. . . .	B = 0,24033
	log a = 0,36173
	log $a+b$ = 0,60206.

12.

Если изъ данныхъ Логариѳмовъ двухъ величинъ a и b требуется найти Логариѳмъ разности ихъ, то разность между Логариѳмами, log $a \backsim$ log b, будетъ или менѣе или болѣе чѣмъ 0,30103. Въ первомъ случаѣ разность log $a \backsim$ log b пріискиваю въ столбцѣ B, во второмъ въ столбцѣ C, и выбираю соотвѣтствующее C или B, и имѣю въ первомъ случаѣ

$$\log (a-b) = \log a - \mathrm{C}.$$

вовторомъ

$$\log (a-b) = \log a - \mathrm{B}.$$

Если въ первомъ случаѣ log $a \backsim$ log b не найдется подъ цѣло, въ столбцѣ B, то берется вопервыхъ ближайшее предшествующее число и съ тѣмъ вмѣстѣ какъ соотвѣтствующее оному C, такъ и разность между даннымъ и выбраннымъ B; на сію разность и на разность показанную возлѣ B выбирается поправка изъ столбца P. P. принадлежащаго къ B и придается къ выбранному C. Во второмъ случаѣ подобнымъ же образомъ переходимъ изъ столбца C въ столбецъ B, съ тою разницею что найденная для C поправка изъ выбраннаго B вычитается. — На прим. Изъ log $a = 0{,}25042$ и log $b = 0{,}19033$, требуется вывести Логариѳмъ разности между a и b. Вопервыхъ ищу log a — log $b = 0{,}06009$ въ столбцѣ B, и имѣю

Для B = 0,06017	C = 0,88317
Проп. ч. на 8 при разности 13	= +54
По сему для B = 0,06009.	C = 0,88871
	log a = 0,25042
	log $(a-b)$ = 9,36171.

Подобнымъ образомъ изъ log a=0,89042 и log b=0,24797 найдется log $(a-b)$, если мы log $a \backsim$ log b = 0,64245 будемъ искать въ столбцѣ C, гдѣ находимъ

Для C = 0,64231 . . . . . B = 0,11231
Проп. ч. на 14 при разности 77 . . . . . = — 4
откуда для C = 0,64245 . . . . . B = 0,11227
Log a = 0,89012
log $(a-b)$ = 0,77815.

При употребленіи таблицы надлежитъ еще замѣтить, что начиная отъ разности 20 при A и B, и отъ разности 80 при C, столбецъ P. P. принадлежащій къ B, содержитъ всѣ возможныя величины Аргумента и соотвѣтствующія онымъ пропорціональныя части; но при A и C каждая въ столбцѣ P.P. для какого нибудь Аргумента показанная поправка, принадлежитъ и всѣмъ слѣдующимъ Аргументамъ, до тѣхъ поръ по куда Аргументъ въ столбецъ P. P. перемѣнится. На прим. въ столбцѣ A при разности 20 Аргументамъ 3, 4, 5, 6, 7 принадлежитъ поправка 1, Аргументамъ 8, 9, 10, 11, 12 поправка 2, и т. д.; для Аргументовъ 1 и 2 поправка = 0.

ПРИБАВЛЕНІЯ.

13.

Употребленіе показанныхъ въ концѣ первой таблицы Логариѳмовъ не нуждается въ особенномъ объясненіи. Тамъ же находящіяся *кратныя* Модула Бригговыхъ Логариѳмовъ и возвратнаго Модула, служатъ: первыя для обращенія естественныхъ Логариѳмовъ въ Бригговы, послѣднія для обращенія Бригговыхъ въ естественныя. На прим. Бригговъ Логариѳмъ дуги 206265″, ровной радіусу, находится = 5,3144251; чтобы изъ него вывести естественный Логариѳмъ, мы имѣемъ

для 5	11,512 925 464
— 0,3	0,690 775 528
— 0,01	0,023 025 851
— 0,004	0,009 210 340
— 0,0004	0,000 921 034
— 0,00002	0,000 046 052
— 0,000005	0,000 011 513
— 0,0000001 ...	0,000 000 230
a для 5,3144251 ...	12,236 916 012

По сему log. nat. $206265^{\prime\prime} = 12{,}2369160$.

14.

При концѣ третьей таблицы находится вспомогательная таблица для вычисленія Бригговыхъ и естественныхъ Логариѳмовъ до 16 десятичныхъ, изъ коихъ 14 могутъ быть почитаемы вѣрными. Употребленіе оной есть слѣдующее:

Если къ какому нибудь числу требуется прибрать Бригговъ или естественный Логариѳмъ, то должно вопервыхъ, раздѣлить оное на ближайшее большее число состоящее изъ произведенія основнаго (*) цѣлаго въ положительную или отрицательную степень 10, смотря потому содержитъ ли данное

(*) Основными числами десятичной системы называются числа отъ 1 до 9.

число цѣлыя, или есть чистая десятичная дробь. На прим. для 3172 дѣлишель есть $4.10^3 = 4000$; для 0,00247, $5.10^{-3} = 5.\frac{1}{1000} = 0{,}003$; а для 4,23, $5.10^0 = 5$. Помомъ полученную десятичную дробь должно умножить на факторъ слѣдующей формы: $1 + \frac{x}{10}$, или 1, x, гдѣ число x есть дополненіе до 9 первой десятичной цыфры дроби. Если первая десятичная цыфра произведенія будетъ не 9, то должно умножить оное на $1 + \frac{x'}{10}$ или 1, x', гдѣ x' есть дополненіе до 9 первой цыфры произведенія. Первая десятичная цыфра будетъ теперь конечно 9; полученное такимъ образомъ произведеніе надлежитъ умножить на $1 + \frac{y}{100}$ или 1, 0y, гдѣ y есть дополненіе второй десятичной цыфры до 9, и слѣдственно есть 0, будѣ опая есть 9. Чрезъ повторенныя умноженія показанной формы дойдемъ мы наконецъ до того, что всѣ цыфры произведенія будутъ 9. Сіи умноженія нужно продолжать только до такого числа десятичныхъ, сколько желаемъ имѣть оныхъ въ Логарнемѣ; сверьхъ того могутъ быть сдѣланы еще и другія сокращенія въ вычисленіи. За симъ выбираются изъ вспомогательной таблицы Логарнемы всѣхъ послѣдовательно полученныхъ факторовъ, складываются опые, и сумма вычитается изъ Логарнема первоначальнаго дѣлителя, или непосредственно въ таблицѣ находящагося, или полученнаго чрезъ сложеніе Логарнема основнаго цѣлаго съ Логарнемомъ степени числа 10; разность будетъ искомый Логарнемъ. На прим: Спрашивается Бриговъ; равно какъ и естественный Логарнемъ числа $\pi = 3{,}1415926535897932$ съ 11-ю десятичными. Число π раздѣляемъ на 4, какъ ближайшее большее основное цѣлое, и получаемъ

$$\frac{\pi}{4} = 0{,}7853981633974483$$

и отсюда находимъ слѣдующіе факторы

0,7853981633974483	× 1,2
0,94247779607693796	×1,05
0,98960168588078486	×1,01
0,99949770273959271	×1,0005
0,99999745159096251	×1,000002
0,99999945158586569	×1,0000005
0,99999995158559143	×1,00000004
0,99999999158558954	×1,000000008
0,99999999958558947	

Остальные факторы найдутся безъ дальнѣйшаго умноженія. Теперь имѣемъ.

Факторы	Бритт: Лог.	Естеств: Лог:
1,2	0,07918 12460 47624 8	0,18232 15567 93954 6
1,05	0,02118 92990 69938 1	0,04879 01641 69432 0
1,01	0,00432 13737 82642 6	0,00995 03308 53168 1
1,0005	0,00021 70929 72230 2	0,00049 98750 41651 0
1,00000 2	0,00000 08685 88095 2	0,00000 19999 98000 0
1,00000 05	0,00000 02171 47186 7	0,00000 04999 99875 0

1,00000 004	0,00000 00173 71778 9	0,00000 00399 99999 2
1,00000 0008	0,00000 00034 71355 8	0,00000 00080 00000 0
1,00000 00004	0,00000 00001 73717 8	0,00000 00004 00000 0
1,00000 00000 1	0,00000 00000 04312 9	0,00000 00000 10000 0
1,00000 00000 04	0,00000 00000 01737 2	0,00000 00000 04000 0
1,00000 00000 004	0,00000 00000 00173 7	0,00000 00000 00400 0
1,00000 00000 0001	0,00000 00000 00001 3	0,00000 00000 00010 0
1,00000 00000 00000 5	0,00000 00000 00000 2	0,00000 00000 00000 5
1,00000 00000 00000 02	0,00000 00000 00000 0	0,00000 00000 00000 0
сумма	0,10491 01186 33828 4	0,24156 44752 70490 4
log 4	0,60205 99913 27962 4	1,58629 43611 19890 6
log π	0,49714 98726 94134 0	1,14472 98858 49400 2

Слѣдовательно

log Brigg. π = 0,49714987269413

log nat. π = 1,14472988584940

При обратномъ вопросѣ: Къ данному Логариѳму пріискать соотвѣтствующее число, вычитается изъ онаго ближайше меньшій табличный Логариѳмъ, изъ остатка опять ближайше меньшій, и такъ далѣе доколѣ возможно; потомъ выбираются изъ таблицы соотвѣтствующія вычтеннымъ Логариѳмамъ числа и чрезъ умноженія ихъ получается искомое число напр: если изъ log. nat. h=1 требуется сыскать самую величину h, то получимъ послѣдовательные факторы чрезъ слѣдующее вычисленіе:

Логариѳмы	Факторы
1,00000 00000 00000 0	
0,69314 71805 59945 5	2
0,30685 28194 40054 7	
0,26236 42644 67491 1	1,3
0,04448 85549 72563 6	
0,03922 07131 53281 3	1,04
0,00526 78418 19282 3	
0,00498 75415 11039 1	1,005
0,00028 03003 08243 2	
0,00019 99800 02666 3	1,0002
0,00008 03203 05576 9	
0,00007 99968 00170 7	1,00008
0,00000 03235 05406 2	
0,00000 02999 99955 0	1,0000003
0,00000 00235 05451 2	
0,00000 00199 99999 8	1,00000002
0,00000 00035 05451 4	

Остальные Фокторы

1,00000 0003

1,00000 00005

1,00000 00000 05

1,00000 00000 004

1,00000 00000 0005

1,00000 00000 00001

1,00000 00000 00000 4

получаются, какъ ясно видно, безъ дальнѣйшаго вычитанія. Переумноженіе факторовъ, которое только до 16-й десятичной продолжать нужно, даетъ произведеніе 2,7182818284590447, такъ что основаніе естественныхъ Логариѳмовъ.

$$h = 2{,}718281828459045$$

Вспомогательная таблица можетъ также съ пользою быть употреблена для интерполацій при таблицахъ Логариѳмовъ съ 10-ю и болѣе десятичными.

15.

Формулы для тригонометрическихъ линій

1. $\text{Син. } a^2 + \text{Кос. } a^2 = 1$; $\text{Син. } a = \sqrt{1 - \text{Кос. } a^2}$;
   $\text{Кос. } a = \sqrt{1 - \text{Син. } a^2}$

2. $\text{Танг. } a = \dfrac{\text{Син. } a}{\text{Кос. } a}$; $\text{Котг. } a = \dfrac{\text{Кос. } a}{\text{Син. } a}$; $\text{Танг. } a \, \text{Котг. } a = 1$.

3. $$\text{Син. } a = \sqrt{\frac{1 - \text{Кос. } 2a}{2}} = \frac{\text{Танг. } a}{\sqrt{1 + \text{Танг. } a^2}} = \frac{1}{\sqrt{1 + \text{Котг. } a^2}}$$
$$= 2 \text{ Син. } \tfrac{1}{2} a \text{ Кос. } \tfrac{1}{2} a = \frac{2 \text{ Танг. } \frac{1}{2} a}{1 + \text{Танг. } \frac{1}{2} a^2} = \frac{2 \text{ Котг. } \frac{1}{2} a}{1 + \text{Котг. } \frac{1}{2} a^2}$$

4. $$\text{Кос. } a = \frac{\text{Син. } 2a}{2 \text{ Син. } a} = \frac{1}{\sqrt{1 + \text{Танг. } a^2}} = \frac{\text{Котг. } a}{\sqrt{1 + \text{Котг. } a^2}} = \text{Кос. } \tfrac{1}{2} a^2 - \text{Син. } \tfrac{1}{2} a^2$$
$$= \frac{1 - \text{Танг. } \frac{1}{2} a^2}{1 + \text{Танг. } \frac{1}{2} a^2} = \frac{\text{Котг. } \frac{1}{2} a^2 - 1}{\text{Котг. } \frac{1}{2} a^2 + 1} = 1 - 2 \text{ Син. } \tfrac{1}{2} a^2$$
$$= 2 \text{ Кос. } \tfrac{1}{2} a^2 - 1 = \tfrac{1}{2}\sqrt{1 + \text{Син. } 2a} + \tfrac{1}{2}\sqrt{1 - \text{Син. } 2a}.$$

5. $$\text{Танг. } a = \frac{\sqrt{1 - \text{Кос. } 2a}}{1 + \text{Кос. } 2a} = \frac{\text{Син. } 2a}{1 + \text{Кос. } 2a} = \frac{1 - \text{Кос. } 2a}{\text{Син. } 2a}$$
$$= \frac{2 \text{ Танг. } \frac{1}{2} a}{1 - \text{Танг. } \frac{1}{2} a^2} = \frac{2 \text{ Котг. } \frac{1}{2} a}{\text{Котг. } \frac{1}{2} a^2 - 1}$$

6. $$\text{Котг. } a = \frac{\sqrt{1 + \text{Кос. } 2a}}{1 - \text{Кос. } 2a} = \frac{1 + \text{Кос. } 2a}{\text{Син. } 2a} = \frac{\text{Син } 2a}{1 - \text{Кос. } 2a}$$
$$= \frac{1 - \text{Танг. } \frac{1}{2} a^2}{2 \text{ Танг. } \frac{1}{2} a} = \frac{\text{Котг. } \frac{1}{2} a^2 - 1}{2 \text{ Котг. } \frac{1}{2} a}$$

7. $1 \pm \text{Син } a = 2 \text{ Син. } (45^\circ \pm \tfrac{1}{2} a)^2$.

8. $$\frac{1 + \text{Син } a}{1 - \text{Син } a} = \frac{\text{Танг. } (45^\circ + \frac{1}{2} a)}{\text{Танг. } (45 - \frac{1}{2} a)} = \text{Танг. } (45 + \tfrac{1}{2} a)^2$$
$$= \text{Котг. } (45^\circ - \tfrac{1}{2} a)^2$$

9. $$\frac{1 + \text{Син. } a}{\text{Кос. } a} = \frac{\text{Кос. } a}{1 - \text{Син. } a} = \text{Танг. } (45^\circ + \tfrac{1}{2} a) = \text{Котг. } (45^\circ - \tfrac{1}{2} a)$$

10. $$\frac{1 + \text{Танг. } a}{1 - \text{Танг. } a} = \frac{\text{Котг. } a + 1}{\text{Котг. } a - 1} = \sqrt{\frac{1 + \text{Син. } 2a}{1 - \text{Син. } 2a}} =$$
$$= \frac{\text{Син. } (45^\circ + a)}{\text{Син. } (45^\circ - a)} = \text{Танг. } (45^\circ + a) = \text{Котг. } (45^\circ - a).$$

11. $\text{Син. } (a \pm b) = \text{Син. } a \text{ Кос. } b \pm \text{Кос. } a \text{ Син. } b$.

12. $\text{Кос. } (a \pm b) = \text{Кос. } a \text{ Кос. } b \mp \text{Син. } a \text{ Син. } b$.

13. $\text{Танг.}\,(a \pm b) = \dfrac{\text{Танг.}\,a \pm \text{Танг.}\,b}{1 \mp \text{Танг.}\,a.\,\text{Танг.}\,b} = \dfrac{\text{Кот.}\,b \pm \text{Кот.}\,a}{\text{Кот.}\,a.\,\text{Кот.}\,b \mp 1}$

14. $\text{Кот.}\,(a \pm b) = \dfrac{\text{Кот.}\,a.\,\text{Кот.}\,b \mp 1}{\text{Кот.}\,b \pm \text{Кот.}\,a} = \dfrac{1 \mp \text{Танг.}\,a.\,\text{Танг.}\,b}{\text{Танг.}\,a. \pm \text{Танг.}\,b.}$

15. $\text{Син.}\,a.\,\text{Син.}\,b = \frac{1}{2}\,\text{Кос.}\,(a-b) - \frac{1}{2}\,\text{Кос.}\,(a+b).$

16. $\text{Кос.}\,a.\,\text{Кос.}\,b = \frac{1}{2}\,\text{Кос.}\,(a-b) + \frac{1}{2}\,\text{Кос.}\,(a+b).$

17. $\text{Син.}\,a.\,\text{Кос.}\,b = \frac{1}{2}\,\text{Син.}\,(a+b) + \frac{1}{2}\,\text{Син.}\,(a-b).$

18. $\text{Кос.}\,a.\,\text{Син.}\,b = \frac{1}{2}\,\text{Син.}\,(a+b) - \frac{1}{2}\,\text{Син.}\,(a-b).$

19. $\text{Син.}\,a + \text{Син.}\,b = 2\,\text{Син}\,\frac{1}{2}(a+b)\,.\,\text{Кос.}\,\frac{1}{2}\,(a-b).$

20. $\text{Син.}\,a - \text{Син.}\,b = 2\,\text{Кос}\,\frac{1}{2}\,(a+b)\,.\,\text{Син.}\,\frac{1}{2}\,(a-b).$

21. $\text{Кос.}\,a + \text{Кос.}\,b = 2\,\text{Кос}\,\frac{1}{2}\,(a+b)\,.\,\text{Кос.}\,\frac{1}{2}\,(a-b).$

22. $\text{Кос.}\,b - \text{Кос.}\,a = 2\,\text{Син}\,\frac{1}{2}(a+b)\,.\,\text{Син.}\,\frac{1}{2}\,(a-b).$

23. $\text{Танг.}\,a \pm \text{Танг.}\,b = \dfrac{\text{Син.}\,(a \pm b)}{\text{Кос}\,a\,\text{Кос}\,b}.$

24. $\text{Кот.}\,a \pm \text{Кот.}\,b = \dfrac{\text{Син}\,(b \pm a)}{\text{Син}\,a.\,\text{Син}\,b}.$

25. $\text{Кот.}\,a \pm \text{Танг.}\,b = \dfrac{\text{Кос}\,(a \mp b)}{\text{Син}\,a.\,\text{Кос}\,b}.$

26. $1 \pm \text{Танг}\,a.\,\text{Танг}\,b = \dfrac{\text{Кос}\,(a \mp b)}{\text{Кос}\,a.\,\text{Кос}\,b}.$

27. $\text{Кот}\,a.\,\text{Кот}\,b \pm 1 = \dfrac{\text{Кос}\,(a \mp b)}{\text{Син}\,a.\,\text{Син}\,b}.$

28. $\text{Син}\,(a+b).\,\text{Син}\,(a-b) = \text{Син}\,a^2 - \text{Син}\,b^2 =$
$= \frac{1}{2}\,\text{Кос}\,2\,b - \frac{1}{2}\,\text{Кос}\,2\,a.$

29. $\text{Кос}\,(a+b).\,\text{Кос}\,(a-b) = \text{Кос}\,a^2 - \text{Син}\,b^2 =$
$= \frac{1}{2}\,\text{Кос}\,2\,b + \frac{1}{2}\,\text{Кос}\,2\,a.$

30. $\text{Син}\,(a \pm b).\,\text{Кос}\,(a \mp b) = \frac{1}{2}\,\text{Син}\,2\,a \pm \frac{1}{2}\,\text{Син}\,2\,b.$

16.

Формулы для рѣшения Треугольниковъ.

Углы треугольника означены чрезъ A, B, C, противулежащія онымъ стороны чрезъ a, b, c, F есть площадь треугольника.

1. Плоскій прямоугольный треугольникъ. ($C = 90°$).

Данныя.	Искомыя.	Формулы.
a, b.	A, B, c, F.	$\text{Танг}\,A = \dfrac{a}{b} = \text{Кот}\,B;\ c = \dfrac{a}{\text{Син.}\,A} = \dfrac{b}{\text{Кос.}\,A} = \sqrt{a^2+b^2};\ F = \frac{1}{2}\,a\,b.$
a, c.	A, B, b, F.	$\text{Син.}\,A = \dfrac{a}{c} = \text{Кос}\,B;\ b = a\,\text{Кот}\,A = c\,\text{Кос}\,A = \sqrt{c^2-a};\ F = \frac{1}{2}\,ab.$
c, A.	a, b, F.	$a = c\,\text{Син}\,A;\ b = c\,\text{Кос}\,A;\ F = \frac{1}{4}\,c^2\,\text{Син}\,2\,A.$
a, A.	b, c, F.	$b = a\,\text{Кот}\,A;\ c = \dfrac{a}{\text{Син}\,A};\ F = \frac{1}{2}\,a^2\,\text{Кот}\,A.$

2. Плоскій треугольникъ вообще.

Данныя.	Искомыя.	Формулы
$a, b, c.$	$A, F.$	$\text{Син } \frac{1}{2} A = \frac{1}{2}\frac{\sqrt{(a+b-c)(a-b+c)}}{bc}$; $\text{Кос } \frac{1}{2}A = \frac{1}{2}\frac{\sqrt{(a+b+c)(-a+b+c)}}{bc}$ $F = \frac{1}{4}\sqrt{(a+b+c)\ (a+b-c)\ (a-b+c)\ (-a+b+c)}.$
$a, b, C.$	$A, B, c, F.$	$\text{Танг N} = \frac{(a-b)}{(a+b)}\text{Кот } \frac{1}{2}C$, и $A = 90^\circ - \frac{1}{2}C + \text{N}$; $B = 90^\circ - \frac{1}{2}C - \text{N}$; $c = \frac{a\ \text{Син } C}{\text{Син } A} = \frac{b\ \text{Син } C}{\text{Син } B}$; $F = \frac{1}{2}ab.\ \text{Син } C.$
$a, b, A.$	$B, c, C, F.$	$\text{Син } B = \frac{b\ \text{Син } A}{a}$; $c = \frac{a\ \text{Син } (A+B)}{\text{Син } A.}$; $C = 180^\circ - (A+B)$; $F = \frac{1}{2}\ ab\ \text{Син } (A+B).$
$a, A, B.$	$b, c, C, F.$	$b = \frac{a\ \text{Син } B}{\text{Син } A}$; $c = \frac{a\ \text{Син } (A+B)}{\text{Син } A}$; $C = 180^\circ - (A+B)$; $F = \frac{a^2\ \text{Син } B.\ \text{Син } (A+B)}{2\ \text{Син } A.}$

3. Прямоугольный Сферическій треугольникъ ($\text{C} = 90^\circ$).

$a, b.$	$A, B, c.$	$\text{Кот } A = \text{Кот } a.\ \text{Син } b$; $\text{Кот } B = \text{Кот } b.\ \text{Син a}$; $\text{Кос } c = \text{Кос } a.\ \text{Кос } b.$
$a, c.$	$A, B, b.$	$\text{Син } A = \text{Син } a : \text{Син } c$; $\text{Кос } B = \text{Танг } a.\ \text{Кот } c$; $\text{Кос } b = \text{Кос } c : \text{Кос } a.$
$a, A.$	$B, b, c.$	$\text{Син } B = \text{Кос } A : \text{Кос } a$; $\text{Син } b = \text{Танг } a.\ \text{Кот } A$; $\text{Син } c = \text{Син } a : \text{Сиц } A.$
$a, B.$	$A, b, c.$	$\text{Кос } A = \text{Кос } a.\ \text{Син } B$; $\text{Танг } b = \text{Танг } B.\ \text{Син } a$; $\text{Кот } c = \text{Кот } a.\ \text{Кос } B.$
$c, A.$	$a, b, B.$	$\text{Син } a = \text{Син } c.\ \text{Син } A$; $\text{Танг } b = \text{Танг } c.\ \text{Кос } a$; $\text{Кот } B = \text{Кос } c.\ \text{Танг } A.$
$A, B.$	$a, b, c.$	$\text{Кос } a = \text{Кос } A : \text{Син } B$; $\text{Кос } b = \text{Кос } B : \text{Син } A$; $\text{Кос } c = \text{Кот } A.\ \text{Кот } B.$ Назвавъ S полную площадь шара, будетъ $F = \frac{A + B - 90^\circ}{720^\circ} S.$

4. Четвертной Сферическій треугольникъ ($c = 90^\circ$).

$A, B.$	$a, b, C.$	$\text{Кот } a = \text{Кот } A.\ \text{Син } B$; $\text{Кот } b = \text{Кот } B.\ \text{Син A}$; $\text{Кос } C = \text{Кос } A.\ \text{Кос } B.$
$A, C.$	$a, b, B.$	$\text{Син } a = \text{Син } A : \text{Син } C$; $\text{Кос } b = -\ \text{Танг } A.\ \text{Кот } C$; $\text{Кос } B = -\ \text{Кос } C : \text{Кос } A.$
$A, a.$	$b, B, C.$	$\text{Син } b = \text{Кос } a : \text{Кос } A$; $\text{Син } B = \text{Танг } A.\ \text{Кот } a$; $\text{Син } C = \text{Син } A : \text{Син } a.$

Данныя.	Искомыя.	Формулы.
A, b.	a, B, C.	Кос a = Кос A. Син b; Танг B = Танг b. Син A; Кот C = — Кот A. Кос b.
C, a.	A, B, b.	Син A = Син C. Син a; Танг B = — Танг C. Кос a; Кот b = — Кос C. Танг a.
a, b.	A, B, C.	Кос A = Кос a. Син b; Кос B = Кос b. Син a; Кос C = — Кот a. Кот b. $F = \frac{A + B + C - 180^\circ}{720^\circ} S$.

5. Сферическій треугольникъ вообще.

a, b, c.	A.	Кос $A = \frac{\text{Кос } a - \text{Кос } b . \text{ Кос } c)}{\text{Син } b . \text{ Син } c}$; Син $\frac{1}{2} A = \sqrt{\frac{\text{Син } \frac{1}{2}(a + b - c) . \text{ Син } \frac{1}{2}(a - b + c)}{\text{Син } b . \text{ Син } c}}$ Кос $\frac{1}{2} A = \sqrt{\frac{\text{Син } \frac{1}{2}(a + b + c) . \text{ Син } \frac{1}{2}(- a + b + c)}{\text{Син } b . \text{ Син } c}}$
a, b, C.	A, B, c.	I . . . . . Син c. Син A = Син a. Син C; II . . . . . Син c. Кос A = Кос a. Син b — Син a. Кос b. Кос C. I* . . . . . Син c. Син B = Син b. Син C; II* . . . . Син c. Кос B = Кос b. Син a — Син b. Кос a. Кос C; III . . . . . Кос c = Кос a. Кос b. + Син a. Син b. Кос C; Раздѣля II на I получаемъ Кот A и Син c; также раздѣля II* на I* имѣемъ Кот B и Син c; изъ III получаемъ Кос c непосредственно. I . . . . . Син $\frac{1}{2} c$. Син $\frac{1}{2}(A - B)$ = Кос $\frac{1}{2} C$. Син $\frac{1}{2}(a - b)$; II . . . . Син $\frac{1}{2} c$. Кос $\frac{1}{2}(A - B)$ = Син $\frac{1}{2} C$. Син $\frac{1}{2}(a + b)$; III . . . . Кос $\frac{1}{2} c$. Син $\frac{1}{2}(A + B)$ = Кос $\frac{1}{2} C$. Кос $\frac{1}{2}(a - b)$; IV . . . . Кос $\frac{1}{2} c$. Кос $\frac{1}{2}(A + B)$ = Син $\frac{1}{2} C$. Кос $\frac{1}{2}(a + b)$; Изъ I и II получается Танг $\frac{1}{2}(A - B)$ и Син $\frac{1}{2} c$; изъ III и IV Танг $\frac{1}{2}(A + B)$ и Кос $\frac{1}{2} c$; по сему $\frac{1}{2}(A - B)$ и $\frac{1}{2}(A + B)$, а отсюда A и B; и сверьхъ того двѣ величины для $\frac{1}{2} c$, коихъ согласіе служитъ повѣркою вычисленія.
A, B, c.	a, b, C.	I . . . . . Син C. Син a = Син A. Син c; II . . . . . Син C. Кос a = Кос A. Син B + Син A. Кос B. Кос c; I* . . . . . Син C. Син b = Син B. Син c; II* . . . . . Син C. Кос b = Кос B. Син A + Син B. Кос A. Кос c; III . . . . . Кос C = — Кос A. Кос B + Син A. Син B. Кос c; Чрезъ раздѣленіе II на I получается Кот a и Син C; раздѣленіе II* на I* даетъ Кот B и Син C; изъ III получается непосредственно Кос C. I . . . . Син $\frac{1}{2} C$. Син $\frac{1}{2}(a + b)$ = Син $\frac{1}{2} c$. Кос $\frac{1}{2}(A - B)$; II . . . . Син $\frac{1}{2} C$. Кос $\frac{1}{2}(a + b)$ = Кос $\frac{1}{2} c$. Кос $\frac{1}{2}(A + B)$; III . . . . Кос $\frac{1}{2} C$. Син $\frac{1}{2}(a - b)$ = Син $\frac{1}{2} c$. Син $\frac{1}{2}(A - B)$; IV . . . . Кос $\frac{1}{2} C$. Кос $\frac{1}{2}(a - b)$ = Кос $\frac{1}{2} c$. Син $\frac{1}{2}(A + B)$;

Данныя.	Искомыя.	Формулы
		Изъ I и II получаемъ мы Танг $\frac{1}{2}(a+b)$ и Син $\frac{1}{2}C$; изъ III и IV Танг $\frac{1}{2}(a-b)$ и Кос $\frac{1}{2}C$; слѣдственно имѣемъ $\frac{1}{2}(a+b)$ и $\frac{1}{2}(a-b)$ и отсюда a и b; и сверьхъ того двѣ величины для $\frac{1}{2}C$, коихъ согласіе служишь можетъ повѣркою вычисленія.
$a, b, A.$	$B,\ C,\ c.$	$\text{Син B} = \frac{\text{Син } b.\ \text{Син } A}{\text{Син } a.}$
		$\text{Танг.}\frac{1}{2}C = \frac{\text{Кос}\frac{1}{2}(a-b)}{\text{Кос}\frac{1}{2}(a+b)}\text{Котг}\frac{1}{2}(A+B) = \frac{\text{Син}\frac{1}{2}(a-b)}{\text{Син}\frac{1}{2}(a+b)}\text{Котг}\frac{1}{2}(A-B);$
		$\text{Танг.}\frac{1}{2}c = \frac{\text{Кос}\frac{1}{2}(A+B)}{\text{Кос}\frac{1}{2}(A-B)}\text{Танг}\frac{1}{2}(a+b) = \frac{\text{Син}\frac{1}{2}(A+B)}{\text{Син}\frac{1}{2}(A-B)}\text{Танг}\frac{1}{2}(a-b);$
$A, B, a.$	$b,\ c,\ C.$	$\text{Син } b = \frac{\text{Син } B.\ \text{Син } a}{\text{Син } A.};$
		Танг $\frac{1}{2}C$ и Танг $\frac{1}{2}c$ какъ выше.
$A, B, C.$	a	$\text{Кос } a = \frac{\text{Кос } A + \text{Кос } B.\ \text{Кос } C}{\text{Син } A.\ \text{Син } B.};$
		$\text{Син}\frac{1}{2}a = \sqrt{\frac{-\text{Кос}\frac{1}{2}(A+B+C).\ \text{Кос}\frac{1}{2}(-A+B+C)}{\text{Син } B.\ \text{Син } C}};$
		$\text{Кос}\frac{1}{2}a = \sqrt{\frac{\text{Кос}\frac{1}{2}(A-B+C).\ \text{Кос}\frac{1}{2}(A+B-c)}{\text{Син } B.\ \text{Син } C}};$
		$F = \frac{A+B+C-180^\circ}{720^\circ}S$

Къ симъ таблицамъ Вестфаля прибавлены еще нижеслѣдующія.

IV. Таблица квадратныхъ чиселъ отъ 1 до 1000.
V. Таблица квадратныхъ корней отъ 1 до 1000.
VI. Таблица кубичныхъ чиселъ отъ 1 до 1000.
VII. Таблица кубичныхъ корней отъ 1 до 100.
VIII. Таблица хордъ отъ 0° до 90° отъ 10′ до 10′.
IX. Таблица настоящихъ Синусовъ, Тангенсовъ и Секансовъ отъ 0° до 90° отъ 10′ до 10′.

I.

ТАБЛИЦЫ ЛОГАРИѲМОВЪ

ЧИСЕЛЪ

отъ 1 до 10800.

″	N.	Log. 0′	N.	Log. 1′	N.	Log. 2′	N.	Log. 3′	N.	Log. 4′	N.	Log. 5′	N.	Log. 6′
0			60	1.77815	120	2.07918	180	2.25527	240	2.38021	300	2.47712	360	2.55630
	1	0.00000	61	1.78533	121	2.08279	181	2.25768	241	2.38202	301	2.47857	361	2.55751
	2	0.30103	62	1.79239	122	2.08636	182	2.26007	242	2.38382	302	2.48001	362	2.55871
	3	0.47712	63	1.79934	123	2.08991	183	2.26245	243	2.38561	303	2.48144	363	2.55991
	4	0.60206	64	1.80618	124	2.09342	184	2.26482	244	2.38739	304	2.48287	364	2.56110
	5	0.69897	65	1.81291	125	2.09691	185	2.26717	245	2.38917	305	2.48430	365	2.56229
	6	0.77815	66	1.81954	126	2.10037	186	2.26951	246	2.39094	306	2.48572	366	2.56348
	7	0.84510	67	1.82607	127	2.10380	187	2.27184	247	2.39270	307	2.48714	367	2.56467
	8	0.90309	68	1.83251	128	2.10721	188	2.27416	248	2.39445	308	2.48855	368	2.56585
	9	0.95424	69	1.83885	129	2.11059	189	2.27646	249	2.39620	309	2.48996	369	2.56703
10	10	1.00000	70	1.84510	130	2.11394	190	2.27875	250	2.39794	310	2.49136	370	2.56820
	11	1.04139	71	1.85126	131	2.11727	191	2.28103	251	2.39967	311	2.49276	371	2.56937
	12	1.07918	72	1.85733	132	2.12057	192	2.28330	252	2.40140	312	2.49415	372	2.57054
	13	1.11394	73	1.86332	133	2.12385	193	2.28556	253	2.40312	313	2.49554	373	2.57171
	14	1.14613	74	1.86923	134	2.12710	194	2.28780	254	2.40483	314	2.49693	374	2.57287
	15	1.17609	75	1.87506	135	2.13033	195	2.29003	255	2.40654	315	2.49831	375	2.57403
	16	1.20412	76	1.88081	136	2.13354	196	2.29226	256	2.40824	316	2.49969	376	2.57519
	17	1.23045	77	1.88649	137	2.13672	197	2.29447	257	2.40993	317	2.50106	377	2.57634
	18	1.25527	78	1.89209	138	2.13988	198	2.29667	258	2.41162	318	2.50243	378	2.57749
	19	1.27875	79	1.89763	139	2.14301	199	2.29885	259	2.41330	319	2.50379	379	2.57864
20	20	1.30103	80	1.90309	140	2.14613	200	2.30103	260	2.41497	320	2.50515	380	2.57978
	21	1.32222	81	1.90849	141	2.14922	201	2.30320	261	2.41664	321	2.50651	381	2.58092
	22	1.34242	82	1.91381	142	2.15229	202	2.30535	262	2.41830	322	2.50786	382	2.58206
	23	1.36173	83	1.91908	143	2.15534	203	2.30750	263	2.41996	323	2.50920	383	2.58320
	24	1.38021	84	1.92428	144	2.15836	204	2.30963	264	2.42160	324	2.51055	384	2.58433
	25	1.39794	85	1.92942	145	2.16137	205	2.31175	265	2.42325	325	2.51188	385	2.58546
	26	1.41497	86	1.93450	146	2.16435	206	2.31387	266	2.42488	326	2.51322	386	2.58659
	27	1.43136	87	1.93952	147	2.16732	207	2.31597	267	2.42651	327	2.51455	387	2.58771
	28	1.44716	88	1.94448	148	2.17026	208	2.31806	268	2.42813	328	2.51587	388	2.58883
	29	1.46240	89	1.94939	149	2.17319	209	2.32015	269	2.42975	329	2.51720	389	2.58995
30	30	1.47712	90	1.95424	150	2.17609	210	2.32222	270	2.43136	330	2.51851	390	2.59106
	31	1.49136	91	1.95904	151	2.17898	211	2.32428	271	2.43297	331	2.51983	391	2.59218
	32	1.50515	92	1.96379	152	2.18184	212	2.32634	272	2.43457	332	2.52114	392	2.59329
	33	1.51851	93	1.96848	153	2.18469	213	2.32838	273	2.43616	333	2.52244	393	2.59439
	34	1.53148	94	1.97313	154	2.18752	214	2.33041	274	2.43775	334	2.52375	394	2.59550
	35	1.54407	95	1.97772	155	2.19033	215	2.33244	275	2.43933	335	2.52504	395	2.59660
	36	1.55630	96	1.98227	156	2.19312	216	2.33445	276	2.44091	336	2.52634	396	2.59770
	37	1.56820	97	1.98677	157	2.19590	217	2.33646	277	2.44248	337	2.52763	397	2.59879
	38	1.57978	98	1.99123	158	2.19866	218	2.33846	278	2.44404	338	2.52892	398	2.59988
	39	1.59106	99	1.99564	159	2.20140	219	2.34044	279	2.44560	339	2.53020	399	2.60097
40	40	1.60206	100	2.00000	160	2.20412	220	2.34242	280	2.44716	340	2.53148	400	2.60206
	41	1.61278	101	2.00432	161	2.20683	221	2.34439	281	2.44871	341	2.53275	401	2.60314
	42	1.62325	102	2.00860	162	2.20952	222	2.34635	282	2.45025	342	2.53403	402	2.60423
	43	1.63347	103	2.01284	163	2.21219	223	2.34830	283	2.45179	343	2.53529	403	2.60531
	44	1.64345	104	2.01703	164	2.21484	224	2.35025	284	2.45332	344	2.53656	404	2.60638
	45	1.65321	105	2.02119	165	2.21748	225	2.35218	285	2.45484	345	2.53782	405	2.60746
	46	1.66276	106	2.02531	166	2.22011	226	2.35411	286	2.45637	346	2.53908	406	2.60853
	47	1.67210	107	2.02938	167	2.22272	227	2.35603	287	2.45788	347	2.54033	407	2.60959
	48	1.68124	108	2.03342	168	2.22531	228	2.35793	288	2.45939	348	2.54158	408	2.61066
	49	1.69020	109	2.03743	169	2.22789	229	2.35984	289	2.46090	349	2.54283	409	2.61172
50	50	1.69897	110	2.04139	170	2.23045	230	2.36173	290	2.46240	350	2.54407	410	2.61278
	51	1.70757	111	2.04532	171	2.23300	231	2.36361	291	2.46389	351	2.54531	411	2.61384
	52	1.71600	112	2.04922	172	2.23553	232	2.36549	292	2.46538	352	2.54654	412	2.61490
	53	1.72428	113	2.05308	173	2.23805	233	2.36736	293	2.46687	353	2.54777	413	2.61595
	54	1.73239	114	2.05690	174	2.24055	234	2.36922	294	2.46835	354	2.54900	414	2.61700
	55	1.74036	115	2.06070	175	2.24304	235	2.37107	295	2.46982	355	2.55023	415	2.61805
	56	1.74819	116	2.06446	176	2.24551	236	2.37291	296	2.47129	356	2.55145	416	2.61909
	57	1.75587	117	2.06819	177	2.24797	237	2.37475	297	2.47276	357	2.55267	417	2.62014
	58	1.76343	118	2.07188	178	2.25042	238	2.37658	298	2.47422	358	2.55388	418	2.62118
	59	1.77085	119	2.07555	179	2.25285	239	2.37840	299	2.47567	359	2.55509	419	2.62221
60	60	1.77815	120	2.07918	180	2.25527	240	2.38021	300	2.47712	360	2.55630	420	2.62325

O°	N.	0	1	2	3	4	5	6	7	8	9	P. P.
7′ 0″	42	62 325	428	531	631	737	839	941	*013	*141	*246	
10	43	63 317	448	548	649	749	849	949	*048	*147	*246	
20	44	64 345	441	542	640	738	836	933	*031	*128	*225	
30	45	65 321	418	514	610	706	801	896	992	*087	*181	
40	46	66 276	370	464	558	652	745	839	932	*025	*117	
50	47	67 210	302	394	486	578	669	761	852	943	*034	
8′ 0	48	68 124	215	305	395	485	574	664	753	842	931	
10	49	69 020	108	197	285	373	461	548	636	723	810	
20	50	897	984	*070	*157	*243	*329	*415	*501	*586	*672	
30	51	70 757	842	927	*012	*096	*181	*265	*349	*433	*517	
40	52	71 600	684	767	850	933	*016	*099	*181	*263	*346	
50	53	72 428	509	591	673	754	835	916	997	*078	*159	
9′ 0	54	73 239	320	400	480	560	640	719	799	878	957	
10	55	74 036	115	194	273	351	429	507	586	663	741	
20	56	819	896	974	*051	*128	*205	*282	*358	*435	*511	
30	57	75 587	664	740	815	891	967	*042	*118	*193	*268	
40	58	76 343	418	492	567	641	716	790	864	938	*012	
50	59	77 085	159	232	305	379	452	525	597	670	743	
10′ 0	60	815	887	960	*032	*104	*176	*247	*319	*390	*462	
10	61	78 533	604	675	746	817	888	958	*029	*099	*169	
20	62	79 239	309	379	449	518	588	657	727	796	865	
30	63	934	*003	*072	*140	*209	*277	*346	*414	*482	*550	
40	64	80 618	686	754	821	889	956	*023	*090	*158	*224	
50	65	81 291	358	425	491	558	624	690	757	823	889	
11′ 0	66	951	*020	*086	*151	*217	*282	*347	*413	*478	*543	
10	67	82 607	672	737	802	866	930	995	*059	*123	*187	
20	68	83 251	315	378	442	506	569	632	696	759	822	
30	69	885	948	*011	*073	*136	*198	*261	*323	*386	*448	
40	70	84 510	572	634	696	757	819	880	942	*003	*065	
50	71	85 126	187	248	309	370	431	491	552	612	673	
12′ 0	72	733	794	854	914	974	*034	*094	*153	*213	*273	
10	73	86 332	392	451	510	570	629	688	747	806	864	
20	74	923	982	*040	*099	*157	*216	*274	*332	*390	*448	
30	75	87 506	564	622	679	737	795	852	910	967	*024	
40	76	88 081	138	195	252	309	366	423	480	536	593	
50	77	649	705	762	818	874	930	986	*042	*098	*154	
13′ 0	78	89 209	265	321	376	432	487	542	597	653	708	
10	79	763	818	873	927	982	*037	*091	*146	*200	*255	
20	80	90 309	363	417	472	526	580	634	687	741	795	
30	81	849	902	956	*009	*062	*116	*169	*222	*275	*328	
40	82	91 381	434	487	540	593	645	698	751	803	855	
50	83	908	960	*012	*065	*117	*169	*221	*273	*324	*376	
14′ 0	84	92 428	480	531	583	634	686	737	788	840	891	
10	85	942	993	*044	*095	*146	*197	*247	*298	*349	*399	
20	86	93 450	500	551	601	651	702	752	802	852	902	
30	87	952	*002	*052	*101	*151	*201	*250	*300	*349	*399	
40	88	94 448	498	547	596	645	691	743	792	841	890	
50	89	939	988	*036	*085	*134	*182	*231	*279	*328	*376	
15′ 0	90	95 424	472	521	569	617	665	713	761	809	856	
10	91	904	952	999	*047	*095	*142	*190	*237	*284	*332	
20	92	96 379	426	473	520	567	611	661	708	755	802	
30	93	848	895	942	988	*035	*081	*128	*174	*220	*267	
40	94	97 313	359	405	451	497	543	589	635	681	727	
50	95	772	818	864	909	955	*000	*046	*091	*137	*182	
16′ 0	96	98 227	272	318	363	408	453	498	543	588	632	
10	97	677	722	767	811	856	900	945	989	*034	*078	
20	98	99 123	167	211	255	300	344	388	432	476	520	
30	99	564	607	651	695	739	782	826	870	913	957	
40	100	00 000	043	087	130	173	217	260	303	346	389	
50	101	00 432	475	518	561	604	647	689	732	775	817	
v	N.	0	1	2	3	4	5	6	7	8	9	

Corr.

Sin O°

7′	∓	0
8		1
9		1
10		1
11		1
12		1
13		1
14		1
15		2
16		2
17		2

Tang O°

7′	±	0
8		1
9		1
10		1
11		1
12		2
13		2
14		2
15		3
16		3
17		3

S. 4,68 5573; T. 4,68 5578 V. 4,68 5575

O°	N.		0	1	2	3	4	5	6	7	8	9
17′ 0	102	00	860	903	945	988	*030	*072	*115	*157	*199	*242
10	103	01	281	326	368	410	452	494	536	578	620	662
20	104		703	745	787	828	870	912	953	995	*036	*078
30	105	02	119	160	202	243	284	325	366	407	449	490
40	106		531	572	612	653	694	735	776	816	857	898
50	107		938	979	*019	*060	*100	*141	*181	*222	*262	*302
18′ 0	108	03	342	383	423	463	503	543	583	623	663	703
10	109		743	782	822	862	902	941	981	*021	*060	*100
20	110	04	139	179	218	258	297	336	376	415	454	493
30	111		532	571	610	650	689	727	766	805	844	883
40	112		922	961	999	*038	*077	*115	*154	*192	*231	*269
50	113	05	308	346	385	423	461	500	538	576	614	652
19′ 0	114		690	729	767	805	843	881	918	956	994	*032
10	115	06	070	108	145	183	221	258	296	333	371	408
20	116		446	483	521	558	595	633	670	707	744	781
30	117		819	856	893	930	967	*004	*041	*078	*115	*151
40	118	07	188	225	262	298	335	372	408	445	482	518
50	119		555	591	628	664	700	737	773	809	846	882
20′ 0	120		918	954	990	*027	*063	*099	*135	*171	*207	*243
10	121	08	279	314	350	386	422	458	493	529	565	600
20	122		636	672	707	743	778	814	849	884	920	955
30	123		991	*026	*061	*096	*132	*167	*202	*237	*272	*307
40	124	09	342	377	412	447	482	517	552	587	621	656
50	125		691	726	760	795	830	864	899	934	968	*003
21′ 0	126	10	037	072	106	140	175	209	243	278	312	346
10	127		380	415	449	483	517	551	585	619	653	687
20	128		721	755	789	823	857	890	924	958	992	*025
30	129	11	059	093	126	160	193	227	261	294	327	361
40	130		394	428	461	494	528	561	594	628	661	694
50	131		727	760	793	826	860	893	926	959	992	*024
22′ 0	132	12	057	090	123	156	189	222	254	287	320	352
10	133		385	418	450	483	516	548	581	613	646	678
20	134		710	743	775	808	840	872	905	937	969	*001
30	135	13	033	066	098	130	162	194	226	258	290	322
40	136		354	386	418	450	481	513	545	577	609	640
50	137		672	704	735	767	799	830	862	893	925	956
23′ 0	138		988	*019	*051	*082	*114	*145	*176	*208	*239	*270
10	139	14	301	333	364	395	426	457	489	520	551	582
20	140		613	644	675	706	737	768	799	829	860	891
30	141		922	953	983	*014	*045	*076	*106	*137	*168	*198
40	142	15	229	259	290	320	351	381	412	442	473	503
50	143		534	564	594	625	655	685	715	746	776	806
24′ 0	144		836	866	897	927	957	987	*017	*047	*077	*107
10	145	16	137	167	197	227	256	286	316	346	376	406
20	146		435	465	495	524	554	584	613	643	673	702
30	147		732	761	791	820	850	879	909	938	967	997
40	148	17	026	056	085	114	143	173	202	231	260	289
50	149		319	348	377	406	435	464	493	522	551	580
25′ 0	150		609	638	667	696	725	754	782	811	840	869
10	151		898	926	955	984	*013	*041	*070	*099	*127	*156
20	152	18	184	213	241	270	298	327	355	384	412	441
30	153		469	498	526	554	583	611	639	667	696	724
40	154		752	780	808	837	865	893	921	949	977	*005
50	155	19	033	061	089	117	145	173	201	229	257	285
26′ 0	156		312	340	368	396	424	451	479	507	535	562
10	157		590	618	645	673	700	728	756	783	811	838
20	158		866	893	921	948	976	*003	*030	*058	*085	*112
30	159	20	140	167	194	222	249	276	303	330	358	385
40	160		412	439	466	493	520	548	575	602	629	656
50	161		683	710	737	763	790	817	844	871	898	925
″	N.		0	1	2	3	4	5	6	7	8	9

P. P.

	43	42
1	4,3	4,2
2	8,6	8,4
3	12,9	12,6
4	17,2	16,8
5	21,5	21,0
6	25,8	25,2
7	30,1	29,4
8	34,4	33,6
9	38,7	37,8

	41	40
1	4,1	4,0
2	8,2	8,0
3	12,3	12,0
4	16,4	16,0
5	20,5	20,0
6	24,6	24,0
7	28,7	28,0
8	32,8	32,0
9	36,9	36,0

	39	38
1	3,9	3,8
2	7,8	7,6
3	11,7	11,4
4	15,6	15,2
5	19,5	19,0
6	23,4	22,8
7	27,3	26,6
8	31,2	30,4
9	35,1	34,2

P. P.

	37	36	35	34
1	3,7	3,6	3,5	3,4
2	7,4	7,2	7,0	6,8
3	11,1	10,8	10,5	10,2
4	14,8	14,4	14,0	13,6
5	18,5	18,0	17,5	17,0
6	22,2	21,6	21,0	20,4
7	25,9	25,2	24,5	23,8
8	29,6	28,8	28,0	27,2
9	33,3	32,4	31,5	30,6

	33	32	31	30
1	3,3	3,2	3,1	3,0
2	6,6	6,4	6,2	6,0
3	9,9	9,6	9,3	9,0
4	13,2	12,8	12,4	12,0
5	16,5	16,0	15,5	15,0
6	19,8	19,2	18,6	18,0
7	23,1	22,4	21,7	21,0
8	26,4	25,6	24,8	24,0
9	29,7	28,8	27,9	27,0

	29	28	27
1	2,9	2,8	2,7
2	5,8	5,6	5,4
3	8,7	8,4	8,1
4	11,6	11,2	10,8
5	14,5	14,0	13,5
6	17,4	16,8	16,2
7	20,3	19,6	18,9
8	23,2	22,4	21,6
9	26,1	25,2	24,3

Corr.

Sin O°

17′	∓ 2
18	2
19	2
20	3
21	3
22	3
23	3
24	4
25	4
26	4
27	5

Tang O°

17′	± 3
18	4
19	4
20	5
21	5
22	6
23	6
24	7
25	8
26	8
27	9

S. 4,68 5570; T. 4,68 5584 V. 4,68 5575

O°	N.	0	1	2	3	4	5	6	7	8	9
27′ 0	162 20	952	978	*005	*032	*059	*085	*112	*139	*165	*192
10	163 21	219	245	272	299	325	352	378	405	431	458
20	164	484	511	537	564	590	617	643	669	696	722
30	165	748	775	801	827	854	880	906	932	958	985
40	166 22	011	037	063	089	115	141	167	194	220	246
50	167	272	298	324	350	376	401	427	453	479	505
28′ 0	168	531	557	583	608	634	660	686	712	737	763
10	169	789	814	840	866	891	917	943	968	994	*019
20	170 23	045	070	096	121	147	172	198	223	249	274
30	171	300	325	350	376	401	426	452	477	502	528
40	172	553	578	603	629	654	679	704	729	754	779
50	173	805	830	855	880	905	930	955	980	*005	*030
29′ 0	174 24	055	080	105	130	155	180	204	229	254	279
10	175	304	329	353	378	403	428	452	477	502	527
20	176	551	576	601	625	650	674	699	724	748	773
30	177	797	822	846	871	895	920	944	969	993	*018
40	178 25	042	066	091	115	139	164	188	212	237	261
50	179	285	310	334	358	382	406	431	455	479	503
30′ 0	180	527	551	575	600	624	648	672	696	720	744
10	181	768	792	816	840	861	888	912	935	959	983
20	182 26	007	031	055	079	102	126	150	174	198	221
30	183	245	269	293	316	340	364	387	411	435	458
40	184	482	505	529	553	576	600	623	647	670	694
50	185	717	741	764	788	811	834	858	881	905	928
31′ 0	186	951	975	998	*021	*045	*068	*091	*114	*138	*161
10	187 27	184	207	231	254	277	300	323	346	370	393
20	188	416	439	462	485	508	531	554	577	600	623
30	189	646	669	692	715	738	761	784	807	830	852
40	190	875	898	921	944	967	989	*012	*035	*058	*081
50	191 28	103	126	149	171	194	217	240	262	285	307
32′ 0	192	330	353	375	398	421	443	466	488	511	533
10	193	556	578	601	623	646	668	691	713	735	758
20	194	780	803	825	847	870	892	914	937	959	981
30	195 29	003	026	048	070	092	115	137	159	181	203
40	196	226	248	270	292	314	336	358	380	403	425
50	197	447	469	491	513	535	557	579	601	623	645
33′ 0	198	667	688	710	732	754	776	798	820	842	863
10	199	885	907	929	951	973	994	*016	*038	*060	*081
20	200 30	103	125	146	168	190	211	233	255	276	298
30	201	320	341	363	384	406	428	449	471	492	514
40	202	535	557	578	600	621	643	664	685	707	728
50	203	750	771	792	814	835	856	878	899	920	942
34′ 0	204	963	984	*006	*027	*048	*069	*091	*112	*133	*154
10	205 31	175	197	218	239	260	281	302	323	345	366
20	206	387	408	429	450	471	492	513	534	555	576
30	207	597	618	639	660	681	702	723	744	765	785
40	208	806	827	848	869	890	911	931	952	973	994
50	209 32	015	035	056	077	098	118	139	160	181	201
35′ 0	210	222	243	263	284	305	325	346	366	387	408
10	211	428	449	469	490	510	531	552	572	593	613
20	212	634	654	675	695	715	736	756	777	797	818
30	213	838	858	879	899	919	940	960	980	*001	*021
40	214 33	041	062	082	102	122	143	163	183	203	224
50	215	244	264	284	304	325	345	365	385	405	425
36′ 0	216	445	465	486	506	526	546	566	586	606	626
10	217	646	666	686	706	726	746	766	786	806	826
20	218	846	866	885	905	925	945	965	985	*005	*025
30	219 34	044	064	084	104	124	143	163	183	203	223
40	220	242	262	282	301	321	341	361	380	400	420
50	221	439	459	479	498	518	537	557	577	596	616
″	N.	0	1	2	3	4	5	6	7	8	9

	P.	P.
	27	26
1	2,7	2,6
2	5,4	5,2
3	8,1	7,8
4	10,8	10,4
5	13,5	13,0
6	16,2	15,6
7	18,9	18,2
8	21,6	20,8
9	24,3	23,4
	25	24
1	2,5	2,4
2	5,0	4,8
3	7,5	7,2
4	10,0	9,6
5	12,5	12,0
6	15,0	14,4
7	17,5	16,8
8	20,0	19,2
9	22,5	21,6
	23	22
1	2,3	2,2
2	4,6	4,4
3	6,9	6,6
4	9,2	8,8
5	11,5	11,0
6	13,8	13,2
7	16,1	15,4
8	18,4	17,6
9	20,7	19,8
	21	20
1	2,1	2,0
2	4,2	4,0
3	6,3	6,0
4	8,4	8,0
5	10,5	10,0
6	12,6	12,0
7	14,7	14,0
8	16,8	16,0
9	18,9	18,0
	19	18
1	1,9	1,8
2	3,8	3,6
3	5,7	5,4
4	7,6	7,2
5	9,5	9,0
6	11,4	10,8
7	13,3	12,6
8	15,2	14,4
9	17,1	16,2

Corr.

Sin	O°
27′	5
28	5
29	5
30	6
31	6
32	6
33	7
34	7
35	8
36	8
37	9

Tang	O°
27′	9
28	9
29	10
30	11
31	12
32	12
33	13
34	14
35	15
36	16
37	17

S. 4,68 5566; T. 4,68 5592 V. 4,68 5575

O°	N.		0	1	2	3	4	5	6	7	8	9
37′ 0″	222	34	635	655	674	694	713	733	753	772	792	811
10	223		830	850	869	889	908	928	947	967	986	*005
20	224	35	025	044	064	083	102	122	141	160	180	199
30	225		218	238	257	276	295	315	334	353	372	392
40	226		411	430	449	468	488	507	526	545	564	583
50	227		603	622	641	660	679	698	717	736	755	774
38′ 0	228		793	813	832	851	870	889	908	927	946	965
10	229		984	*003	*021	*040	*059	*078	*097	*116	*135	*154
20	230	36	173	192	211	229	248	267	286	305	324	342
30	231		361	380	399	418	436	455	474	493	511	530
40	232		549	568	586	605	624	642	661	680	698	717
50	233		736	754	773	791	810	829	847	866	884	903
39′ 0	234		922	940	959	977	996	*014	*033	*051	*070	*088
10	235	37	107	125	144	162	181	199	218	236	254	273
20	236		291	310	328	346	365	383	401	420	438	457
30	237		475	493	511	530	548	566	585	603	621	639
40	238		658	676	694	712	731	749	767	785	803	822
50	239		840	858	876	894	912	931	949	967	985	*003
40′ 0	240	38	021	039	057	075	093	112	130	148	166	184
10	241		202	220	238	256	274	292	310	328	346	364
20	242		382	399	417	435	453	471	489	507	525	543
30	243		561	578	596	614	632	650	668	686	703	721
40	244		739	757	775	792	810	828	846	863	881	899
50	245		917	934	952	970	987	*005	*023	*041	*058	*076
41′ 0	246	39	094	111	129	146	164	182	199	217	235	252
10	247		270	287	305	322	340	358	375	393	410	428
20	248		445	463	480	498	515	533	550	568	585	602
30	249		620	637	655	672	690	707	724	742	759	777
40	250		794	811	829	846	863	881	898	915	933	950
50	251		967	985	*002	*019	*037	*054	*071	*088	*106	*123
42′ 0	252	40	140	157	175	192	209	226	243	261	278	295
10	253		312	329	346	364	381	398	415	432	449	466
20	254		483	500	518	535	552	569	586	603	620	637
30	255		654	671	688	705	722	739	756	773	790	807
40	256		824	841	858	875	892	909	926	943	960	976
50	257		993	*010	*027	*044	*061	*078	*095	*111	*128	*145
43′ 0	258	41	162	179	196	212	229	246	263	280	296	313
10	259		330	347	363	380	397	414	430	447	464	481
20	260		497	514	531	547	564	581	597	614	631	647
30	261		664	681	697	714	731	747	764	780	797	814
40	262		830	847	863	880	896	913	929	946	963	979
50	263		996	*012	*029	*045	*062	*078	*095	*111	*127	*144
44′ 0	264	42	160	177	193	210	226	243	259	275	292	308
10	265		325	341	357	374	390	406	423	439	455	472
20	266		488	504	521	537	553	570	586	602	619	635
30	267		651	667	684	700	716	732	749	765	781	797
40	268		813	830	846	862	878	894	911	927	943	959
50	269		975	991	*008	*024	*040	*056	*072	*088	*104	*120
45′ 0	270	43	136	152	169	185	201	217	233	249	265	281
10	271		297	313	329	345	361	377	393	409	425	441
20	272		457	473	489	505	521	537	553	569	584	600
30	273		616	632	648	664	680	696	712	727	743	759
40	274		775	791	807	823	838	854	870	886	902	917
50	275		933	949	965	981	996	*012	*028	*044	*059	*075
46′ 0	276	44	091	107	122	138	154	170	185	201	217	232
10	277		248	264	279	295	311	326	342	358	373	389
20	278		404	420	436	451	467	483	498	514	529	545
30	279		560	576	592	607	623	638	651	669	685	700
40	280		716	731	747	762	778	793	809	821	840	855
50	281	44	871	886	902	917	932	948	963	979	994	*010
//	N.		0	1	2	3	4	5	6	7	8	9

P. P.	
20	
1	2,0
2	4,0
3	6,0
4	8,0
5	10,0
6	12,0
7	14,0
8	16,0
9	18,0
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7	13,3
8	15,2
9	17,1
18	
1	1,8
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3	5,4
4	7,2
5	9,0
6	10,8
7	12,6
8	14,4
9	16,2
17	
1	1,7
2	3,4
3	5,1
4	6,8
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7	11,9
8	13,6
9	15,3
16	
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2	3,2
3	4,8
4	6,4
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7	11,2
8	12,8
9	14,4
15	
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6	9,0
7	10,5
8	12,0
9	13,5

Corr.	
Sin O°	
37′	∓ 9
38	9
39	9
40	10
41	10
42	11
43	11
44	12
45	13
46	13
47	14
Tang O°	
37′	±17
38	18
39	18
40	19
41	20
42	21
43	23
44	24
45	25
46	26
47	27

S. 4,68 5561; T. 4,68 5602 V. 4,68 5575

O°	N.		0	1	2	3	4	5	6	7	8	9
47′ 0	282	45	025	040	056	071	086	102	117	133	148	163
10	283		179	194	209	225	240	255	271	286	301	317
20	284		332	347	362	378	393	408	423	439	454	469
30	285		484	500	515	530	545	561	576	591	606	621
40	286		637	652	667	682	697	712	728	743	758	773
50	287		788	803	818	834	849	864	879	894	909	921
48′ 0	288		939	954	969	984	*000	*015	*030	*045	*060	*075
10	289	46	090	105	120	135	150	165	180	195	210	225
20	290		240	255	270	285	300	315	330	345	359	374
30	291		389	404	419	434	449	464	479	494	509	523
40	292		538	553	568	583	598	613	627	642	657	672
50	293		687	702	716	731	746	761	776	790	805	820
49′ 0	294		835	850	864	879	894	909	923	938	953	967
10	295		982	997	*012	*026	*041	*056	*070	*085	*100	*114
20	296	47	129	144	159	173	188	202	217	232	246	261
30	297		276	290	305	319	334	349	363	378	392	407
40	298		422	436	451	465	480	494	509	524	538	553
50	299		567	582	596	611	625	640	654	669	683	698
50′ 0	300		712	727	741	756	770	784	799	813	828	842
10	301		857	871	885	900	914	929	943	958	972	986
20	302	48	001	015	029	044	058	073	087	101	116	130
30	303		144	159	173	187	202	216	230	244	259	273
40	304		287	302	316	330	344	359	373	387	401	416
50	305		430	444	458	473	487	501	515	530	544	558
51′ 0	306		572	586	601	615	629	643	657	671	686	700
10	307		714	728	742	756	770	785	799	813	827	841
20	308		855	869	883	897	911	926	940	954	968	982
30	309		996	*010	*024	*038	*052	*066	*080	*094	*108	*122
40	310	49	136	150	164	178	192	206	220	234	248	262
50	311		276	290	304	318	332	346	360	374	388	402
52′ 0	312		415	429	443	457	471	485	499	513	527	541
10	313		554	568	582	596	610	624	638	651	665	679
20	314		693	707	721	734	748	762	776	790	803	817
30	315		831	845	859	872	886	900	914	927	941	955
40	316		969	982	996	*010	*024	*037	*051	*065	*079	*092
50	317	50	106	120	133	147	161	174	188	202	215	229
53′ 0	318		243	256	270	284	297	311	325	338	352	365
10	319		379	393	406	420	433	447	461	474	488	501
20	320		515	529	542	556	569	583	596	610	623	637
30	321		651	664	678	691	705	718	732	745	759	772
40	322		786	799	813	826	840	853	866	880	893	907
50	323		920	934	947	961	974	987	*001	*014	*028	*041
54′ 0	324	51	055	068	081	095	108	121	135	148	162	175
10	325		188	202	215	228	242	255	268	282	295	308
20	326		322	335	348	362	375	388	402	415	428	441
30	327		455	468	481	495	508	521	534	548	561	574
40	328		587	601	614	627	640	654	667	680	693	706
50	329		720	733	746	759	772	786	799	812	825	838
55′ 0	330		851	865	878	891	904	917	930	943	957	970
10	331		983	996	*009	*022	*035	*048	*061	*075	*088	*101
20	332	52	114	127	140	153	166	179	192	205	218	231
30	333		241	257	270	284	297	310	323	336	349	362
40	334		375	388	401	414	427	440	453	466	479	492
50	335		504	517	530	543	556	569	582	595	608	621
56′ 0	336		634	647	660	673	686	699	711	724	737	750
10	337		763	776	789	802	815	827	840	853	866	879
20	338		892	905	917	930	943	956	969	982	994	*007
30	339	53	020	033	046	058	071	084	097	110	122	135
40	340		148	161	173	186	199	212	221	237	250	263
50	341		275	288	301	314	326	339	352	364	377	390
"	N.		0	1	2	3	4	5	6	7	8	9

P.	P.
	16
1	1,6
2	3,2
3	4,8
4	6,4
5	8,0
6	9,6
7	11,2
8	12,8
9	14,4
	15
1	1,5
2	3,0
3	4,5
4	6,0
5	7,5
6	9,0
7	10,5
8	12,0
9	13,5
	14
1	1,4
2	2,8
3	4,2
4	5,6
5	7,0
6	8,4
7	9,8
8	11,2
9	12,6
	13
1	1,3
2	2,6
3	3,9
4	5,2
5	6,5
6	7,8
7	9,1
8	10,4
9	11,7
	12
1	1,2
2	2,4
3	3,6
4	4,8
5	6,0
6	7,2
7	8,4
8	9,6
9	10,8

Corr.	
Sin	O″
47′	∓ 14
48	14
49	15
50	15
51	16
52	17
53	17
54	18
55	19
56	19
57	20
Tang	O″
47′	± 27
48	28
49	29
50	30
51	32
52	33
53	34
54	36
55	37
56	38
57	40

S. 4,68 5555; T. 4,68 5615 V. 4,68 5575

O°	N.	0	1	2	3	4	5	6	7	8	9
57′ 0″	342	53 403	415	428	441	453	466	479	491	504	517
10	343	529	542	555	567	580	593	605	618	631	643
20	344	656	668	681	694	706	719	732	744	757	769
30	345	782	794	807	820	832	845	857	870	882	895
40	346	908	920	933	945	958	970	983	995	*008	*020
50	347	54 033	045	058	070	083	095	108	120	133	145
58′ 0	348	158	170	183	195	208	220	233	245	258	270
10	349	283	295	307	320	332	345	357	370	382	394
20	350	407	419	432	444	456	469	481	494	506	518
30	351	531	543	555	568	580	593	605	617	630	642
40	352	654	667	679	691	704	716	728	741	753	765
50	353	777	790	802	814	827	839	851	864	876	888
59′ 0	354	900	913	925	937	949	962	974	986	998	*011
10	355	55 023	035	047	060	072	084	096	108	121	133
20	356	145	157	169	182	194	206	218	230	242	255
30	357	267	279	291	303	315	328	340	352	364	376
40	358	388	400	413	425	437	449	461	473	485	497
50	359	509	522	534	546	558	570	582	594	606	618
60′ 0	360	630	642	654	666	678	691	703	715	727	739
10	361	751	763	775	787	799	811	823	835	847	859
20	362	871	883	895	907	919	931	943	955	967	979
30	363	991	*003	*015	*027	*038	*050	*062	*074	*086	*098
40	364	56 110	122	134	146	158	170	182	194	205	217
50	365	229	241	253	265	277	289	301	312	324	336
61′ 0	366	348	360	372	384	396	407	419	431	443	455
10	367	467	478	490	502	514	526	538	549	561	573
20	368	585	597	608	620	632	644	656	667	679	691
30	369	703	714	726	738	750	761	773	785	797	808
40	370	820	832	844	855	867	879	891	902	914	926
50	371	937	949	961	972	984	996	*008	*019	*031	*043
62′ 0	372	57 054	066	078	089	101	113	124	136	148	159
10	373	171	183	194	206	217	229	241	252	264	276
20	374	287	299	310	322	334	345	357	368	380	392
30	375	403	415	426	438	449	461	473	484	496	507
40	376	519	530	542	553	565	576	588	600	611	623
50	377	634	646	657	669	680	692	703	715	726	738
63′ 0	378	749	761	772	784	795	807	818	830	841	852
10	379	864	875	887	898	910	921	933	944	955	967
20	380	978	990	*001	*013	*024	*035	*047	*058	*070	*081
30	381	58 092	104	115	127	138	149	161	172	184	195
40	382	206	218	229	240	252	263	274	286	297	309
50	383	320	331	343	354	365	377	388	399	410	422
64′ 0	384	433	444	456	467	478	490	501	512	524	535
10	385	546	557	569	580	591	602	614	625	636	647
20	386	659	670	681	692	704	715	726	737	749	760
30	387	771	782	794	805	816	827	838	850	861	872
40	388	883	894	906	917	928	939	950	961	973	984
50	389	995	*006	*017	*028	*040	*051	*062	*073	*084	*095
65′ 0	390	59 106	118	129	140	151	162	173	184	195	207
10	391	218	229	240	251	262	273	284	295	306	318
20	392	329	340	351	362	373	384	395	406	417	428
30	393	439	450	461	472	483	494	506	517	528	539
40	394	550	561	572	583	594	605	616	627	638	649
50	395	660	671	682	693	704	715	726	737	748	759
66′ 0	396	770	780	791	802	813	824	835	846	857	868
10	397	879	890	901	912	923	934	945	956	966	977
20	398	988	999	*010	*021	*032	*043	*054	*065	*076	*086
30	399	60 097	108	119	130	141	152	163	173	184	195
40	400	206	217	228	239	249	260	271	282	293	301
50	401	314	325	336	347	358	369	379	390	401	412
″	N.	0	1	2	3	4	5	6	7	8	9

P.	P.
	13
1	1,3
2	2,6
3	3,9
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9	10,8
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5	5,0
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7	7,0
8	8,0
9	9,0

Corr.	
Sin O°	
57′	∓ 20
58	21
59	21
60	22
61	23
62	24
63	24
64	25
65	26
66	27
67	28
Tang O°	
57′	± 40
58	41
59	43
60	44
61	45
62	47
63	48
64	50
65	52
66	53
67	55

S. 4,68 5547; T. 4,68 5630 V. 4,68 5575

1°	N.		0	1	2	3	4	5	6	7	8	9
7′ 0″	402	60	423	433	444	455	466	477	487	498	509	520
10	403		531	541	552	563	574	584	595	606	617	627
20	404		638	649	660	670	681	692	703	713	724	735
30	405		746	756	767	778	788	799	810	821	831	842
40	406		853	863	874	885	895	906	917	927	938	949
50	407		959	970	981	991	*002	*013	*023	*034	*045	*055
8′ 0	408	61	066	077	087	098	109	119	130	140	151	162
10	409		172	183	194	204	215	225	236	247	257	268
20	410		278	289	300	310	321	331	342	352	363	374
30	411		384	395	405	416	426	437	448	458	469	479
40	412		490	500	511	521	532	542	553	563	574	584
50	413		595	606	616	627	637	648	658	669	679	690
9′ 0	414		700	711	721	731	742	752	763	773	784	794
10	415		805	815	826	836	847	857	868	878	888	899
20	416		909	920	930	941	951	962	972	982	993	*003
30	417	62	014	024	034	045	055	066	076	086	097	107
40	418		118	128	138	149	159	170	180	190	201	211
50	419		221	232	242	252	263	273	284	294	304	315
10′ 0	420		325	335	346	356	366	377	387	397	408	418
10	421		428	439	449	459	469	480	490	500	511	521
20	422		531	542	552	562	572	583	593	603	613	624
30	423		634	644	655	665	675	685	696	706	716	726
40	424		737	747	757	767	778	788	798	808	818	829
50	425		839	849	859	870	880	890	900	910	921	931
11′ 0	426		941	951	961	972	982	992	*002	*012	*022	*033
10	427	63	043	053	063	073	083	094	104	114	124	131
20	428		144	155	165	175	185	195	205	215	225	236
30	429		246	256	266	276	286	296	306	317	327	337
40	430		347	357	367	377	387	397	407	417	428	438
50	431		448	458	468	478	488	498	508	518	528	538
12′ 0	432		548	558	568	579	589	599	609	619	629	639
10	433		649	659	669	679	689	699	709	719	729	739
20	434		749	759	769	779	789	799	809	819	829	839
30	435		849	859	869	879	889	899	909	919	929	939
40	436		949	959	969	979	988	998	*008	*018	*028	*038
50	437	64	048	058	068	078	088	098	108	118	128	137
13′ 0	438		147	157	167	177	187	197	207	217	227	237
10	439		246	256	266	276	286	296	306	316	326	335
20	440		345	355	365	375	385	395	404	414	424	434
30	441		444	454	464	473	483	493	503	513	523	532
40	442		542	552	562	572	582	591	601	611	621	631
50	443		640	650	660	670	680	689	699	709	719	729
14′ 0	444		738	748	758	768	777	787	797	807	816	826
10	445		836	846	856	865	875	885	895	904	914	924
20	446		933	943	953	963	972	982	992	*002	*011	*021
30	447	65	031	040	050	060	070	079	089	099	108	118
40	448		128	137	147	157	167	176	186	196	205	215
50	449		225	234	244	254	263	273	283	292	302	312
15′ 0	450		321	331	341	350	360	369	379	389	398	408
10	451		418	427	437	447	456	466	475	485	495	504
20	452		514	523	533	543	552	562	571	581	591	600
30	453		610	619	629	639	648	658	667	677	686	696
40	454		706	715	725	734	744	753	763	772	782	792
50	455		801	811	820	830	839	849	858	868	877	887
16′ 0	456		896	906	916	925	935	944	954	963	973	982
10	457		992	*001	*011	*020	*030	*039	*049	*058	*068	*077
20	458	66	087	096	106	115	124	134	143	153	162	172
30	459		181	191	200	210	219	229	238	247	257	266
40	460		276	285	295	304	314	323	332	342	351	361
50	461		370	380	389	398	408	417	427	436	445	455
″	N.		0	1	2	3	4	5	6	7	8	9

P.	P.
	11
1	1,1
2	2,2
3	3,3
4	4,4
5	5,5
6	6,6
7	7,7
8	8,8
9	9,9
	10
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4	4,0
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7	7,0
8	8,0
9	9,0
	9
1	0,9
2	1,8
3	2,7
4	3,6
5	4,5
6	5,4
7	6,3
8	7,2
9	8,1

Corr.	
Sin 1°	
7′	± 28
8	28
9	29
10	30
11	31
12	32
13	33
14	34
15	35
16	36
17	36
Tang 1°	
7′	± 55
8	57
9	58
10	60
11	62
12	63
13	65
14	67
15	69
16	71
17	73

S. 4,68 5539; T. 4,68 5648 V. 4.68 5575

1°	N.		0	1	2	3	4	5	6	7	8	9
17′ 0″	462	66	464	474	483	492	502	511	521	530	539	549
10	463		558	567	577	586	596	605	614	624	633	642
20	464		652	661	671	680	689	699	708	717	727	736
30	465		745	755	764	773	783	792	801	811	820	829
40	466		839	848	857	867	876	885	894	904	913	922
50	467		932	941	950	960	969	978	987	997	*006	*015
18′ 0	468	67	025	034	043	052	062	071	080	089	099	108
10	469		117	127	136	145	154	164	173	182	191	201
20	470		210	219	228	237	247	256	265	274	284	293
30	471		302	311	321	330	339	348	357	367	376	385
40	472		394	403	413	422	431	440	449	459	468	477
50	473		486	495	504	514	523	532	541	550	560	569
19′ 0	474		578	587	596	605	614	624	633	642	651	660
10	475		669	679	688	697	706	715	724	733	742	752
20	476		761	770	779	788	797	806	815	825	834	843
30	477		852	861	870	879	888	897	906	916	925	934
40	478		943	952	961	970	979	988	997	*006	*015	*024
50	479	68	034	043	052	061	070	079	088	097	106	115
20′ 0	480		124	133	142	151	160	169	178	187	196	205
10	481		215	224	233	242	251	260	269	278	287	296
20	482		305	314	323	332	341	350	359	368	377	386
30	483		395	404	413	422	431	440	449	458	467	476
40	484		485	494	502	511	520	529	538	547	556	565
50	485		574	583	592	601	610	619	628	637	646	655
21′ 0	486		664	673	681	690	699	708	717	726	735	744
10	487		753	762	771	780	789	797	806	815	824	833
20	488		842	851	860	869	878	886	895	904	913	922
30	489		931	940	949	958	966	975	984	993	*002	*011
40	490	69	020	028	037	046	055	064	073	082	090	099
50	491		108	117	126	135	144	152	161	170	179	188
22′ 0	492		197	205	214	223	232	241	249	258	267	276
10	493		285	294	302	311	320	329	338	346	355	364
20	494		373	381	390	399	408	417	425	434	443	452
30	495		461	469	478	487	496	504	513	522	531	539
40	496		548	557	566	574	583	592	601	609	618	627
50	497		636	644	653	662	671	679	688	697	705	714
23′ 0	498		723	732	740	749	758	767	775	784	793	801
10	499		810	819	827	836	845	854	862	871	880	888
20	500		897	906	914	923	932	940	949	958	966	975
30	501		984	992	*001	*010	*018	*027	*036	*044	*053	*062
40	502	70	070	079	088	096	105	114	122	131	140	148
50	503		157	165	174	183	191	200	209	217	226	234
24′ 0	504		243	252	260	269	278	286	295	303	312	321
10	505		329	338	346	355	364	372	381	389	398	406
20	506		415	424	432	441	449	458	467	475	484	492
30	507		501	509	518	526	535	544	552	561	569	578
40	508		586	595	603	612	621	629	638	646	655	663
50	509		672	680	689	697	706	714	723	731	740	749
25′ 0	510		757	766	774	783	791	800	808	817	825	834
10	511		842	851	859	868	876	885	893	902	910	919
20	512		927	935	944	952	961	969	978	986	995	*003
30	513	71	012	020	029	037	046	054	063	071	079	088
40	514		096	105	113	122	130	139	147	155	164	172
50	515		181	189	198	206	214	223	231	240	248	257
26′ 0	516		265	273	282	290	299	307	315	324	332	341
10	517		349	357	366	374	383	391	399	408	416	425
20	518		433	441	450	458	466	475	483	492	500	508
30	519		517	525	533	542	550	559	567	575	584	592
40	520		600	609	617	625	634	642	650	659	667	675
50	521	71	684	692	700	709	717	725	734	742	750	759
″	N.		0	1	2	3	4	5	6	7	8	9

P. P.

10

1	1,0
2	2,0
3	3,0
4	4,0
5	5,0
6	6,0
7	7,0
8	8,0
9	9,0

9

1	0,9
2	1,8
3	2,7
4	3,6
5	4,5
6	5,4
7	6,3
8	7,2
9	8,1

8

1	0,8
2	1,6
3	2,4
4	3,2
5	4,0
6	4,8
7	5,6
8	6,4
9	7,2

Corr.

Sin 1°

17′	∓ 36
18	37
19	38
20	39
21	40
22	41
23	42
24	43
25	44
26	45
27	46

Tang 1°

17′	± 73
18	74
19	76
20	78
21	80
22	82
23	84
24	86
25	88
26	90
27	93

S. 4,68 5529; T. 4,68 5668 V. 4,68 5575

1°	N.		0	1	2	3	4	5	6	7	8	9
27′ 0″	522	71	767	775	784	792	800	809	817	825	834	842
10	523		850	858	867	875	883	892	900	908	917	925
20	524		933	941	950	958	966	975	983	991	999	*008
30	525	72	016	024	032	041	049	057	066	074	082	090
40	526		099	107	115	123	132	140	148	156	165	173
50	527		181	189	198	206	214	222	230	239	247	255
28′ 0	528		263	272	280	288	296	304	313	321	329	337
10	529		346	354	362	370	378	387	395	403	411	419
20	530		428	436	444	452	460	469	477	485	493	501
30	531		509	518	526	534	542	550	558	567	575	583
40	532		591	599	607	616	624	632	640	648	656	665
50	533		673	681	689	697	705	713	722	730	738	746
29′ 0	534		754	762	770	779	787	795	803	811	819	827
10	535		835	843	852	860	868	876	884	892	900	908
20	536		916	925	933	941	949	957	965	973	981	989
30	537		997	*006	*014	*022	*030	*038	*046	*054	*062	*070
40	538	73	078	086	094	102	111	119	127	135	143	151
50	539		159	167	175	183	191	199	207	215	223	231
30′ 0	540		239	247	255	263	272	280	288	296	304	312
10	541		320	328	336	344	352	360	368	376	384	392
20	542		400	408	416	424	432	440	448	456	464	472
30	543		480	488	496	504	512	520	528	536	544	552
40	544		560	568	576	584	592	600	608	616	624	632
50	545		640	648	656	664	672	679	687	695	703	711
31′ 0	546		719	727	735	743	751	759	767	775	783	791
10	547		799	807	815	823	830	838	846	854	862	870
20	548		878	886	894	902	910	918	926	933	941	949
30	549		957	965	973	981	989	997	*005	*013	*020	*028
40	550	74	036	044	052	060	068	076	084	092	099	107
50	551		115	123	131	139	147	155	162	170	178	186
32′ 0	552		194	202	210	218	225	233	241	249	257	265
10	553		273	280	288	296	304	312	320	327	335	343
20	554		351	359	367	374	382	390	398	406	414	421
30	555		429	437	445	453	461	468	476	484	492	500
40	556		507	515	523	531	539	547	554	562	570	578
50	557		586	593	601	609	617	624	632	640	648	656
33′ 0	558		663	671	679	687	695	702	710	718	726	733
10	559		741	749	757	764	772	780	788	796	803	811
20	560		819	827	834	842	850	858	865	873	881	889
30	561		896	904	912	920	927	935	943	950	958	966
40	562		974	981	989	997	*005	*012	*020	*028	*035	*043
50	563	75	051	059	066	074	082	089	097	105	113	120
34′ 0	564		128	136	143	151	159	166	174	182	189	197
10	565		205	213	220	228	236	243	251	259	266	274
20	566		282	289	297	305	312	320	328	335	343	351
30	567		358	366	374	381	389	397	404	412	420	427
40	568		435	442	450	458	465	473	481	488	496	504
50	569		511	519	526	534	542	549	557	565	572	580
35′ 0	570		587	595	603	610	618	626	633	641	648	656
10	571		664	671	679	686	694	702	709	717	724	732
20	572		740	747	755	762	770	778	785	793	800	808
30	573		815	823	831	838	846	853	861	868	876	884
40	574		891	899	906	914	921	929	937	944	952	959
50	575		967	974	982	989	997	*005	*012	*020	*027	*035
36′ 0	576	76	042	050	057	065	072	080	087	095	103	110
10	577		118	125	133	140	148	155	163	170	178	185
20	578		193	200	208	215	223	230	238	245	253	260
30	579		268	275	283	290	298	305	313	320	328	335
40	580		343	350	358	365	373	380	388	395	403	410
50	581	76	418	425	433	440	448	455	462	470	477	485
1′	N.		0	1	2	3	4	5	6	7	8	9

P. P.	
9	
1	0,9
2	1,8
3	2,7
4	3,6
5	4,5
6	5,4
7	6,3
8	7,2
9	8,1
8	
1	0,8
2	1,6
3	2,4
4	3,2
5	4,0
6	4,8
7	5,6
8	6,4
9	7,2
7	
1	0,7
2	1,4
3	2,1
4	2,8
5	3,5
6	4,2
7	4,9
8	5,6
9	6,3

Corr.	
Sin 1°	
27′	∓ 46
28	48
29	49
30	50
31	51
32	52
33	53
34	54
35	55
36	57
37	58
Tang 1°	
27′	± 93
28	95
29	97
30	99
31	101
32	104
33	106
34	108
35	110
36	113
37	115

S. 4,68 5517; T. 4,68 5690 V. 4,68 5575

1°	N.		0	1	2	3	4	5	6	7	8	9
37′ 0″	582	76	492	500	507	515	522	530	537	545	552	559
10	583		567	574	582	589	597	604	612	619	626	634
20	584		641	649	656	664	671	678	686	693	701	708
30	585		716	723	730	738	745	753	760	768	775	782
40	586		790	797	805	812	819	827	834	812	849	856
50	587		864	871	879	886	893	901	908	916	923	930
38′ 0	588		938	945	953	960	967	975	932	989	997	*004
10	589	77	012	019	026	034	041	048	056	063	070	078
20	590		085	093	100	107	115	122	129	137	144	151
30	591		159	166	173	181	188	193	203	210	217	225
40	592		232	240	247	254	262	269	276	283	291	298
50	593		305	313	320	327	335	342	349	357	364	371
39′ 0	594		379	386	393	401	408	415	422	430	437	444
10	595		452	459	466	474	481	488	495	503	510	517
20	596		525	532	539	546	554	561	568	576	583	590
30	597		597	605	612	619	627	634	641	648	656	663
40	598		670	677	685	692	699	706	714	721	728	735
50	599		743	750	757	764	772	779	786	793	801	808
40′ 0	600		815	822	830	837	844	851	859	866	873	880
10	601		887	895	902	909	916	924	931	938	945	952
20	602		960	967	974	981	988	996	*003	*010	*017	*025
30	603	78	032	039	046	053	061	068	075	082	089	097
40	604		104	111	118	125	132	140	147	154	161	168
50	605		176	183	190	197	204	211	219	226	233	240
41′ 0	606		247	254	262	269	276	283	290	297	305	312
10	607		319	326	333	340	347	355	362	369	376	383
20	608		390	398	405	412	419	426	433	440	447	455
30	609		462	469	476	483	490	497	504	512	519	526
40	610		533	540	547	554	561	569	576	583	590	597
50	611		604	611	618	625	633	640	647	654	661	668
42′ 0	612		675	682	689	696	704	711	718	725	732	739
10	613		746	753	760	767	774	781	789	796	803	810
20	614		817	824	831	838	845	852	859	866	873	880
30	615		888	895	902	909	916	923	930	937	944	951
40	616		958	965	972	979	986	993	*000	*007	*014	*021
50	617	79	029	036	043	050	057	064	071	078	085	092
43′ 0	618		099	106	113	120	127	134	141	148	155	162
10	619		169	176	183	190	197	204	211	218	225	232
20	620		239	246	253	260	267	274	281	288	295	302
30	621		309	316	323	330	337	344	351	358	365	372
40	622		379	386	393	400	407	414	421	428	435	442
50	623		449	456	463	470	477	484	491	498	505	511
44′ 0	624		518	525	532	539	546	553	560	567	574	581
10	625		588	595	602	609	616	623	630	637	644	650
20	626		657	664	671	678	685	692	699	706	713	720
30	627		727	734	741	748	754	761	768	775	782	789
40	628		796	803	810	817	824	831	837	844	851	858
50	629		865	872	879	886	893	900	906	913	920	927
45′ 0	630		934	941	948	955	962	969	975	982	989	996
10	631	80	003	010	017	024	030	037	044	051	058	065
20	632		072	079	085	092	099	106	113	120	127	131
30	633		140	147	154	161	168	175	182	188	195	202
40	634		209	216	223	229	236	243	250	257	261	271
50	635		277	284	291	298	305	312	318	325	332	339
46′ 0	636		316	353	359	366	373	380	387	393	400	407
10	637		414	421	428	434	441	448	455	462	468	475
20	638		482	489	496	502	509	516	523	530	536	543
30	639		550	557	564	570	577	584	591	598	604	611
40	610		618	625	632	638	645	652	659	665	672	679
50	641	80	686	693	699	706	713	720	726	733	740	747
″	N.		0	1	2	3	4	5	6	7	8	9

P. P.	
8	
1	0,8
2	1,6
3	2,4
4	3,2
5	4,0
6	4,8
7	5,6
8	6,4
9	7,2
7	
1	0,7
2	1,4
3	2,1
4	2,8
5	3,5
6	4,2
7	4,9
8	5,6
9	6,3
6	
1	0,6
2	1,2
3	1,8
4	2,4
5	3,0
6	3,6
7	4,2
8	4,8
9	5,4

Corr.	
Sin	1°
37′	∓58
38	59
39	60
40	61
41	63
42	64
43	65
44	66
45	68
46	69
47	70
Tang	1°
37′	±115
38	118
39	120
40	122
41	125
42	127
43	130
44	132
45	135
46	138
47	140

S. 4,68 5505; T. 4,68 5715 V. 4,68 5575

1°	N.	0	1	2	3	4	5	6	7	8	9
47′ 0″	642	80 754	760	767	774	781	787	794	801	808	814
10	643	821	828	835	841	848	855	862	868	875	882
20	644	889	895	902	909	916	922	929	936	943	949
30	645	956	963	969	976	983	990	996	*003	*010	*017
40	646	81 023	030	037	043	050	057	064	070	077	084
50	647	090	097	104	111	117	124	131	137	144	151
48′ 0	648	158	164	171	178	184	191	198	204	211	218
10	649	224	231	238	245	251	258	265	271	278	285
20	650	291	298	305	311	318	325	331	338	345	351
30	651	358	365	371	378	385	391	398	405	411	418
40	652	425	431	438	445	451	458	465	471	478	485
50	653	491	498	505	511	518	525	531	538	544	551
49′ 0	654	558	564	571	578	584	591	598	604	611	617
10	655	624	631	637	644	651	657	664	671	677	684
20	656	690	697	704	710	717	723	730	737	743	750
30	657	757	763	770	776	783	790	796	803	809	816
40	658	823	829	836	842	849	856	862	869	875	882
50	659	889	895	902	908	915	921	928	935	941	948
50′ 0	660	954	961	968	974	981	987	994	*000	*007	*014
10	661	82 020	027	033	040	046	053	060	066	073	079
20	662	086	092	099	105	112	119	125	132	138	145
30	663	151	158	164	171	178	184	191	197	204	210
40	664	217	223	230	236	243	249	256	263	269	276
50	665	282	289	295	302	308	315	321	328	334	341
51′ 0	666	347	354	360	367	373	380	387	393	400	406
10	667	413	419	426	432	439	445	452	458	465	471
20	668	478	484	491	497	504	510	517	523	530	536
30	669	543	549	556	562	569	575	582	588	595	601
40	670	607	614	620	627	633	640	646	653	659	666
50	671	672	679	685	692	698	705	711	718	724	730
52′ 0	672	737	743	750	756	763	769	776	782	789	795
10	673	802	808	814	821	827	834	840	847	853	860
20	674	866	872	879	885	892	898	905	911	918	924
30	675	930	937	943	950	956	963	969	975	982	988
40	676	995	*001	*008	*014	*020	*027	*033	*040	*046	*052
50	677	83 059	065	072	078	085	091	097	104	110	117
53′ 0	678	123	129	136	142	149	155	161	168	174	181
10	679	187	193	200	206	213	219	225	232	238	245
20	680	251	257	264	270	276	283	289	296	302	308
30	681	315	321	327	334	340	347	353	359	366	372
40	682	378	385	391	398	404	410	417	423	429	436
50	683	442	448	455	461	467	474	480	487	493	499
54′ 0	684	506	512	518	525	531	537	544	550	556	563
10	685	569	575	582	588	594	601	607	613	620	626
20	686	632	639	645	651	658	664	670	677	683	689
30	687	696	702	708	715	721	727	734	740	746	753
40	688	759	765	771	778	784	790	797	803	809	816
50	689	822	828	835	841	847	853	860	866	872	879
55′ 0	690	885	891	897	904	910	916	923	929	935	942
10	691	948	954	960	967	973	979	985	992	998	*004
20	692	84 011	017	023	029	036	042	048	055	061	067
30	693	073	080	086	092	098	105	111	117	123	130
40	694	136	142	148	155	161	167	173	180	186	192
50	695	198	205	211	217	223	230	236	242	248	255
56′ 0	696	261	267	273	280	286	292	298	305	311	317
10	697	323	330	336	342	348	354	361	367	373	379
20	698	386	392	398	404	410	417	423	429	435	442
30	699	448	454	460	466	473	479	485	491	497	504
40	700	510	516	522	528	535	541	547	553	559	566
50	701	84 572	578	584	590	597	603	609	615	621	628
″	N.	0	1	2	3	4	5	6	7	8	9

P.	P.
	7
1	0,7
2	1,4
3	2,1
4	2,8
5	3,5
6	4,2
7	4,9
8	5,6
9	6,3
	6
1	0,6
2	1,2
3	1,8
4	2,4
5	3,0
6	3,6
7	4,2
8	4,8
9	5,4

Corr.	
Sin. 1°	
47′	∓70
48	72
49	73
50	74
51	76
52	77
53	78
54	80
55	81
56	83
57	84
Tang 1°	
47′	±140
48	143
49	145
50	148
51	151
52	154
53	156
54	159
55	162
56	165
57	168

S. 4,68 5491; T. 4,68 5743 V. 4,68 5575

1°	N.	0	1	2	3	4	5	6	7	8	9
57′ 0″	702	84 634	640	646	652	658	665	671	677	683	689
10	703	696	702	708	714	720	726	733	739	745	751
20	704	757	763	770	776	782	788	794	800	807	813
30	705	819	825	831	837	844	850	856	862	868	874
40	706	880	887	893	899	905	911	917	924	930	936
50	707	942	948	954	960	967	973	979	985	991	997
58′ 0	708	85 003	009	016	022	028	034	040	046	052	058
10	709	065	071	077	083	089	095	101	107	114	120
20	710	126	132	138	144	150	156	163	169	175	181
30	711	187	193	199	205	211	217	224	230	236	242
40	712	248	254	260	266	272	278	285	291	297	303
50	713	309	315	321	327	333	339	345	352	358	364
59′ 0	714	370	376	382	388	394	400	406	412	418	425
10	715	431	437	443	449	455	461	467	473	479	485
20	716	491	497	503	509	516	522	528	534	540	546
30	717	552	558	564	570	576	582	588	594	600	606
40	718	612	618	625	631	637	643	649	655	661	667
50	719	673	679	685	691	697	703	709	715	721	727
60′ 0	720	733	739	745	751	757	763	769	775	781	788
10	721	794	800	806	812	818	824	830	836	842	848
20	722	854	860	866	872	878	884	890	896	902	908
30	723	914	920	926	932	938	944	950	956	962	968
40	724	974	980	986	992	998	*004	*010	*016	*022	*028
50	725	86 034	040	046	052	058	064	070	076	082	088
61′ 0	726	094	100	106	112	118	124	130	136	141	147
10	727	153	159	165	171	177	183	189	195	201	207
20	728	213	219	225	231	237	243	249	255	261	267
30	729	273	279	285	291	297	303	308	314	320	326
40	730	332	338	344	350	356	362	368	374	380	386
50	731	392	398	404	410	415	421	427	433	439	445
62′ 0	732	451	457	463	469	475	481	487	493	499	504
10	733	510	516	522	528	534	540	546	552	558	564
20	734	570	576	581	587	593	599	605	611	617	623
30	735	629	635	641	646	652	658	664	670	676	682
40	736	688	694	700	705	711	717	723	729	735	741
50	737	747	753	759	764	770	776	782	788	794	800
63′ 0	738	806	812	817	823	829	835	841	847	853	859
10	739	864	870	876	882	888	894	900	906	911	917
20	740	923	929	935	941	947	953	958	964	970	976
30	741	982	988	994	999	*005	*011	*017	*023	*029	*035
40	742	87 040	046	052	058	064	070	075	081	087	093
50	743	099	105	111	116	122	128	134	140	146	151
64′ 0	744	157	163	169	175	181	186	192	198	204	210
10	745	216	221	227	233	239	245	251	256	262	268
20	746	274	280	286	291	297	303	309	315	320	326
30	747	332	338	344	349	355	361	367	373	379	384
40	748	390	396	402	408	413	419	425	431	437	442
50	749	448	454	460	466	471	477	483	489	495	500
65′ 0	750	506	512	518	523	529	535	541	547	552	558
10	751	564	570	576	581	587	593	599	604	610	616
20	752	622	628	633	639	645	651	656	662	668	674
30	753	679	685	691	697	703	708	714	720	726	731
40	754	737	743	749	754	760	766	772	777	783	789
50	755	795	800	806	812	818	823	829	835	841	846
66′ 0	756	852	858	861	869	875	881	887	892	898	904
10	757	910	915	921	927	933	938	944	950	955	961
20	758	967	973	978	984	990	996	*001	*007	*013	*018
30	759	88 024	030	036	041	047	053	058	064	070	076
40	760	081	087	093	098	104	110	116	121	127	133
50	761	138	144	150	156	161	167	173	178	184	190
′	N.	0	1	2	3	4	5	6	7	8	9

P. P.	
7	
1	0,7
2	1,4
3	2,1
4	2,8
5	3,5
6	4,2
7	4,9
8	5,6
9	6,3
6	
1	0,6
2	1,2
3	1,8
4	2,4
5	3,0
6	3,6
7	4,2
8	4,8
9	5,4
5	
1	0,5
2	1,0
3	1,5
4	2,0
5	2,5
6	3,0
7	3,5
8	4,0
9	4,5

Corr.

Sin 1°	
57′	± 84
58	85
59	87
60	88
61	90
62	91
63	93
64	94
65	96
66	97
67	99

Tang 1°	
57′	±168
58	170
59	173
60	176
61	179
62	182
63	185
64	188
65	191
66	194
67	198

S. 4,68 5476; T. 4,68 5773 V. 4,68 5575

2°	N.	0	1	2	3	4	5	6	7	8	9
7′ 0	762	88 195	201	207	213	218	224	230	235	241	217
10	763	252	258	264	270	275	281	287	292	298	304
20	764	309	315	321	326	332	338	343	349	355	360
30	765	366	372	377	383	389	395	400	406	412	417
40	766	423	429	434	440	446	451	457	463	468	474
50	767	480	485	491	497	502	508	513	519	525	530
8′ 0	768	536	542	547	553	559	564	570	576	581	587
10	769	593	598	604	610	615	621	627	632	638	643
20	770	649	655	660	666	672	677	683	689	694	700
30	771	705	711	717	722	728	734	739	745	750	756
40	772	762	767	773	779	784	790	795	801	807	812
50	773	818	824	829	835	840	846	852	857	863	868
9′ 0	774	874	880	885	891	897	902	908	913	919	925
10	775	930	936	941	947	953	958	964	969	975	981
20	776	986	992	997	*003	*009	*014	*020	*025	*031	*037
30	777	89 042	048	053	059	064	070	076	081	087	092
40	778	098	104	109	115	120	126	131	137	143	148
50	779	154	159	165	170	176	182	187	193	198	204
10′ 0	780	209	215	221	226	232	237	243	248	254	260
10	781	265	271	276	282	287	293	298	304	310	315
20	782	321	326	332	337	343	348	354	360	365	371
30	783	376	382	387	393	398	404	409	415	421	426
40	784	432	437	443	448	454	459	465	470	476	481
50	785	487	492	498	504	509	515	520	526	531	537
11′ 0	786	542	548	553	559	564	570	575	581	586	592
10	787	597	603	609	614	620	625	631	636	642	647
20	788	653	658	664	669	675	680	686	691	697	702
30	789	708	713	719	724	730	735	741	746	752	757
40	790	763	768	774	779	785	790	796	801	807	812
50	791	818	823	829	834	840	845	851	856	862	867
12′ 0	792	873	878	883	889	894	900	905	911	916	922
10	793	927	933	938	944	949	955	960	966	971	977
20	794	982	988	993	998	*004	*009	*015	*020	*026	*031
30	795	90 037	042	048	053	059	064	069	075	080	086
40	796	091	097	102	108	113	119	124	129	135	140
50	797	146	151	157	162	168	173	179	184	189	195
13′ 0	798	200	206	211	217	222	227	233	238	244	249
10	799	255	260	266	271	276	282	287	293	298	304
20	800	309	314	320	325	331	336	342	347	352	358
30	801	363	369	374	380	385	390	396	401	407	412
40	802	417	423	428	434	439	445	450	455	461	466
50	803	472	477	482	488	493	499	504	509	515	520
14′ 0	804	526	531	536	542	547	553	558	563	569	574
10	805	580	585	590	596	601	607	612	617	623	628
20	806	634	639	644	650	655	660	666	671	677	682
30	807	687	693	698	703	709	714	720	725	730	736
40	808	741	747	752	757	763	768	773	779	784	789
50	809	795	800	806	811	816	822	827	832	838	843
15′ 0	810	849	854	859	865	870	875	881	886	891	897
10	811	902	907	913	918	924	929	934	940	945	950
20	812	956	961	966	972	977	982	988	993	998	*004
30	813	91 009	014	020	025	030	036	041	046	052	057
40	814	062	068	073	078	084	089	094	100	105	110
50	815	116	121	126	132	137	142	148	153	158	164
16′ 0	816	169	174	180	185	190	196	201	206	212	217
10	817	222	228	233	238	243	249	254	259	265	270
20	818	275	281	286	291	297	302	307	312	318	323
30	819	328	334	339	344	350	355	360	365	371	376
40	820	381	387	392	397	403	408	413	418	421	429
50	821	91 434	440	445	450	455	461	466	471	477	482
11	N.	0	1	2	3	4	5	6	7	8	9

P. P.	
6	
1	0,6
2	1,2
3	1,8
4	2,4
5	3,0
6	3,6
7	4,2
8	4,8
9	5,4
5	
1	0,5
2	1,0
3	1,5
4	2,0
5	2,5
6	3,0
7	3,5
8	4,0
9	4,5

Corr.	
Sin 2′	
7′	∓ 99
8	100
9	102
10	104
11	105
12	107
13	108
14	110
15	112
16	113
17	115
Tang 2′	
7′	±198
8	201
9	204
10	207
11	210
12	213
13	217
14	220
15	223
16	227
17	230

S. 4,68 5460; T. 4,68 5805 V. 4,68 5575

2°	N.	0	1	2	3	4	5	6	7	8	9
17′ 0″	822 91	487	492	498	503	508	514	519	521	529	535
10	823	540	545	551	556	561	566	572	577	582	587
20	824	593	598	603	609	614	619	624	630	635	640
30	825	645	651	656	661	666	672	677	682	687	693
40	826	698	703	709	714	719	724	730	735	740	745
50	827	751	756	761	766	772	777	782	787	793	798
18′ 0	828	803	808	814	819	824	829	834	840	845	850
10	829	855	861	866	871	876	882	887	892	897	903
20	830	908	913	918	924	929	934	939	944	950	955
30	831	960	965	971	976	981	986	991	997	*002	*007
40	832 92	012	018	023	028	033	038	044	049	054	059
50	833	065	070	075	080	085	091	096	101	106	111
19′ 0	834	117	122	127	132	137	143	148	153	158	163
10	835	169	174	179	184	189	195	200	205	210	215
20	836	221	226	231	236	241	247	252	257	262	267
30	837	273	278	283	288	293	298	304	309	314	319
40	838	324	330	335	340	345	350	355	361	366	371
50	839	376	381	387	392	397	402	407	412	418	423
20′ 0	840	428	433	438	443	449	451	459	464	469	474
10	841	480	485	490	495	500	505	511	516	521	526
20	842	531	536	542	547	552	557	562	567	572	578
30	843	583	588	593	598	603	609	614	619	624	629
40	844	634	639	645	650	655	660	665	670	675	681
50	845	686	691	696	701	706	711	716	722	727	732
21′ 0	846	737	742	747	752	758	763	768	773	778	783
10	847	788	793	799	804	809	814	819	824	829	834
20	848	840	845	850	855	860	865	870	875	881	886
30	849	891	896	901	906	911	916	921	927	932	937
40	850	942	947	952	957	962	967	973	978	983	988
50	851	993	998	*003	*008	*013	*018	*024	*029	*034	*039
22′ 0	852 93	044	049	054	059	064	069	075	080	085	090
10	853	095	100	105	110	115	120	125	131	136	141
20	854	146	151	156	161	166	171	176	181	186	192
30	855	197	202	207	212	217	222	227	232	237	242
40	856	247	252	258	263	268	273	278	283	288	293
50	857	298	303	308	313	318	323	328	334	339	344
23′ 0	858	349	354	359	364	369	374	379	384	389	394
10	859	399	404	409	414	420	425	430	435	440	445
20	860	450	455	460	465	470	475	480	485	490	495
30	861	500	505	510	515	520	526	531	536	541	546
40	862	551	556	561	566	571	576	581	586	591	596
50	863	601	606	611	616	621	626	631	636	641	646
24′ 0	864	651	656	661	666	671	676	682	687	692	697
10	865	702	707	712	717	722	727	732	737	742	747
20	866	752	757	762	767	772	777	782	787	792	797
30	867	802	807	812	817	822	827	832	837	842	847
40	868	852	857	862	867	872	877	882	887	892	897
50	869	902	907	912	917	922	927	932	937	942	947
25′ 0	870	952	957	962	967	972	977	982	987	992	997
10	871 94	002	007	012	017	022	027	032	037	042	047
20	872	052	057	062	067	072	077	082	086	091	096
30	873	101	106	111	116	121	126	131	136	141	146
40	874	151	156	161	166	171	176	181	186	191	196
50	875	201	206	211	216	221	226	231	236	240	245
26′ 0	876	250	255	260	265	270	275	280	285	290	295
10	877	300	305	310	315	320	325	330	335	340	345
20	878	349	354	359	364	369	374	379	384	389	394
30	879	399	404	409	414	419	424	429	433	438	443
40	880	448	453	458	463	468	473	478	483	488	493
50	881 94	498	503	507	512	517	522	527	532	537	542
″	N.	0	1	2	3	4	5	6	7	8	9

P.	P.
	6
1	0,6
2	1,2
3	1,8
4	2,4
5	3,0
6	3,6
7	4,2
8	4,8
9	5,4
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1	0,5
2	1,0
3	1,5
4	2,0
5	2,5
6	3,0
7	3,5
8	4,0
9	4,5
	4
1	0,4
2	0,8
3	1,2
4	1,6
5	2,0
6	2,4
7	2,8
8	3,2
9	3,6

Corr.	
Sin 2°	
17′	∓ 115
18	117
19	118
20	120
21	122
22	124
23	125
24	127
25	129
26	131
27	132
Tang 2°	
17′	± 230
18	233
19	237
20	240
21	243
22	247
23	250
24	254
25	258
26	261
27	265

S. 4,68 5443; T. 4,68 5840 V. 4,68 5575

2°	N.	0	1	2	3	4	5	6	7	8	9
27′ 0	882	94 547	552	557	562	567	571	576	581	586	591
10	883	596	601	606	611	616	621	626	630	635	640
20	884	645	650	655	660	665	670	675	680	685	689
30	885	694	699	704	709	714	719	724	729	734	738
40	886	743	748	753	758	763	768	773	778	783	787
50	887	792	797	802	807	812	817	822	827	832	836
28′ 0	888	841	846	851	856	861	866	871	876	880	885
10	889	890	895	900	905	910	915	919	924	929	934
20	890	939	944	949	954	959	963	968	973	978	983
30	891	988	993	998	*002	*007	*012	*017	*022	*027	*032
40	892	95 036	041	046	051	056	061	066	071	075	080
50	893	085	090	095	100	105	109	114	119	124	129
29′ 0	894	134	139	143	148	153	158	163	168	173	177
10	895	182	187	192	197	202	207	211	216	221	226
20	896	231	236	240	245	250	255	260	265	270	274
30	897	279	284	289	294	299	303	308	313	318	323
40	898	328	332	337	342	347	352	357	361	366	371
50	899	376	381	386	390	395	400	405	410	415	419
30′ 0	900	424	429	434	439	444	448	453	458	463	468
10	901	472	477	482	487	492	497	501	506	511	516
20	902	521	525	530	535	540	545	550	554	559	564
30	903	569	574	578	583	588	593	598	602	607	612
40	904	617	622	626	631	636	641	646	650	655	660
50	905	665	670	674	679	684	689	694	698	703	708
31′ 0	906	713	718	722	727	732	737	742	746	751	756
10	907	761	766	770	775	780	785	789	794	799	804
20	908	809	813	818	823	828	832	837	842	847	852
30	909	856	861	866	871	875	880	885	890	895	899
40	910	904	909	914	918	923	928	933	938	942	947
50	911	952	957	961	966	971	976	980	985	990	995
32′ 0	912	999	*004	*009	*014	*019	*023	*028	*033	*038	*042
10	913	96 047	052	057	061	066	071	076	080	085	090
20	914	095	099	104	109	114	118	123	128	133	137
30	915	142	147	152	156	161	166	171	175	180	185
40	916	190	194	199	204	209	213	218	223	227	232
50	917	237	242	246	251	256	261	265	270	275	280
33′ 0	918	284	289	294	298	303	308	313	317	322	327
10	919	332	336	341	346	350	355	360	365	369	374
20	920	379	384	388	393	398	402	407	412	417	421
30	921	426	431	435	440	445	450	454	459	464	468
40	922	473	478	483	487	492	497	501	506	511	515
50	923	520	525	530	534	539	544	548	553	558	562
34′ 0	924	567	572	577	581	586	591	595	600	605	609
10	925	614	619	624	628	633	638	642	647	652	656
20	926	661	666	670	675	680	685	689	694	699	703
30	927	708	713	717	722	727	731	736	741	745	750
40	928	755	759	764	769	774	778	783	788	792	797
50	929	802	806	811	816	820	825	830	834	839	844
35′ 0	930	848	853	858	862	867	872	876	881	886	890
10	931	895	900	904	909	914	918	923	928	932	937
20	932	942	946	951	956	960	965	970	974	979	984
30	933	988	993	997	*002	*007	*011	*016	*021	*025	*030
40	934	97 035	039	044	049	053	058	063	067	072	077
50	935	081	086	090	095	100	104	109	114	118	123
36′ 0	936	128	132	137	142	146	151	155	160	165	169
10	937	174	179	183	188	192	197	202	206	211	216
20	938	220	225	230	234	239	243	248	253	257	262
30	939	267	271	276	280	285	290	294	299	304	308
40	940	313	317	322	327	331	336	340	345	350	354
50	941	97 359	361	368	373	377	382	387	391	396	400
2°	N.	0	1	2	3	4	5	6	7	8	9

P.	P.
5	
1	0,5
2	1,0
3	1,5
4	2,0
5	2,5
6	3,0
7	3,5
8	4,0
9	4,5
4	
1	0,4
2	0,8
3	1,2
4	1,6
5	2,0
6	2,4
7	2,8
8	3,2
9	3,6

Corr.

Sin 2′	
27′	∓132
28	134
29	136
30	138
31	140
32	142
33	144
34	145
35	147
36	149
37	151

Tang 2′	
27′	±265
28	268
29	272
30	276
31	279
32	283
33	287
34	291
35	294
36	298
37	302

S. 4,68 5424; T. 4,68 5877 V. 4,68 5575

2°	N.	0	1	2	3	4	5	6	7	8	9
37′ 0″	912	97 405	410	414	419	424	428	433	437	442	447
10	913	451	456	460	465	470	474	479	483	488	493
20	914	497	502	506	511	516	520	525	529	534	539
30	915	543	548	552	557	562	566	571	575	580	585
40	916	589	594	598	603	607	612	617	621	626	630
50	947	635	640	644	649	653	658	663	667	672	676
38′ 0	948	681	685	690	695	699	704	708	713	717	722
10	949	727	731	736	740	745	749	754	759	763	768
20	950	772	777	782	786	791	795	800	804	809	813
30	951	818	823	827	832	836	841	845	850	855	859
40	952	864	868	873	877	882	886	891	896	900	905
50	953	909	914	918	923	928	932	937	941	946	950
39′ 0	951	955	959	964	968	973	978	982	987	991	996
10	955	98 000	005	009	014	019	023	028	032	037	041
20	956	046	050	055	059	064	068	073	078	082	087
30	957	091	096	100	105	109	114	118	123	127	132
40	958	137	141	146	150	155	159	164	168	173	177
50	959	182	186	191	195	200	204	209	214	218	223
40′ 0	960	227	232	236	241	245	250	254	259	263	268
10	961	272	277	281	286	290	295	299	304	308	313
20	962	318	322	327	331	336	340	345	349	354	358
30	963	363	367	372	376	381	385	390	394	399	403
40	964	408	412	417	421	426	430	435	439	444	448
50	965	453	457	462	466	471	475	480	484	489	493
41′ 0	966	498	502	507	511	516	520	525	529	534	538
10	967	543	547	552	556	561	565	570	574	579	583
20	968	588	592	597	601	605	610	614	619	623	628
30	969	632	637	641	646	650	655	659	664	668	673
40	970	677	682	686	691	695	700	704	709	713	717
50	971	722	726	731	735	740	744	749	753	758	762
42′ 0	972	767	771	776	780	784	789	793	798	802	807
10	973	811	816	820	825	829	834	838	843	847	851
20	974	856	860	865	869	874	878	883	887	892	896
30	975	900	905	909	914	918	923	927	932	936	941
40	976	945	949	954	958	963	967	972	976	981	985
50	977	989	994	998	*003	*007	*012	*016	*021	*025	*029
43′ 0	978	99 034	038	043	047	052	056	061	065	069	074
10	979	078	083	087	092	096	100	105	109	114	118
20	980	123	127	131	136	140	145	149	154	158	162
30	981	167	171	176	180	185	189	193	198	202	207
40	982	211	216	220	224	229	233	238	242	247	251
50	983	255	260	264	269	273	277	282	286	291	295
44′ 0	984	300	304	308	313	317	322	326	330	335	339
10	985	344	348	352	357	361	366	370	374	379	383
20	986	388	392	396	401	405	410	414	419	423	427
30	987	432	436	441	445	449	454	458	463	467	471
40	988	476	480	484	489	493	498	502	506	511	515
50	989	520	524	528	533	537	542	546	550	555	559
45′ 0	990	564	568	572	577	581	585	590	594	599	603
10	991	607	612	616	621	625	629	634	638	642	647
20	992	651	656	660	664	669	673	677	682	686	691
30	993	695	699	704	708	712	717	721	726	730	734
40	994	739	743	747	752	756	760	765	769	774	778
50	995	782	787	791	795	800	804	808	813	817	822
46′ 0	996	826	830	835	839	843	848	852	856	861	865
10	997	870	874	878	883	887	891	896	900	904	909
20	998	913	917	922	926	930	935	939	944	948	952
30	999	957	961	965	970	974	978	983	987	991	996
40	1000	000000	013	087	130	174	217	260	304	347	391
50	1001	434	477	521	564	608	651	694	738	781	824
″	N.	0	1	2	3	4	5	6	7	8	9

P. P.

	5
1	0,5
2	1,0
3	1,5
4	2,0
5	2,5
6	3,0
7	3,5
8	4,0
9	4,5

	4
1	0,4
2	0,8
3	1,2
4	1,6
5	2,0
6	2,4
7	2,8
8	3,2
9	3,6

	44
1	4,4
2	8,8
3	13,2
4	17,6
5	22,0
6	26,4
7	30,8
8	35,2
9	39,6

	43
1	4,3
2	8,6
3	12,9
4	17,2
5	21,5
6	25,8
7	30,1
8	34,4
9	38,7

Corr.

Sin 2°	
37′	∓ 151
38	153
39	155
40	157
41	159
42	161
43	163
44	165
45	167
46	169
47	171

Tang 2°	
37′	± 302
38	306
39	310
40	314
41	318
42	322
43	325
44	330
45	334
46	338
47	342

S. 4,68 5404; T. 4,68 5917 V. 4,68 5575

2°	N.	0	1	2	3	4	5	6	7	8	9
47′ 0	1002	000868	911	954	998	*041	*084	*128	*171	*214	*258
10	1003	001301	344	388	431	474	517	561	604	647	690
20	1004	734	777	820	863	907	950	993	*036	*080	*123
30	1005	002166	209	252	296	339	382	425	468	512	555
40	1006	598	641	684	727	771	814	857	900	943	986
50	1007	003029	073	116	159	202	245	288	331	374	417
48′ 0	1008	461	504	547	590	633	676	719	762	805	848
10	1009	891	934	977	*020	*063	*106	*149	*192	*235	*278
20	1010	004321	364	407	450	493	536	579	622	665	708
30	1011	751	794	837	880	923	966	*009	*052	*095	*138
40	1012	005181	223	266	309	352	395	438	481	524	567
50	1013	609	652	695	738	781	824	867	909	952	995
49′ 0	1014	006038	081	124	166	209	252	295	338	380	423
10	1015	466	509	552	594	637	680	723	765	808	851
20	1016	894	936	979	*022	*065	*107	*150	*193	*236	*278
30	1017	007321	364	406	449	492	534	577	620	662	705
40	1018	748	790	833	876	918	961	*004	046	*089	*132
50	1019	008174	217	259	302	345	387	430	472	515	558
50′ 0	1020	600	643	685	728	770	813	856	898	941	983
10	1021	009026	068	111	153	196	238	281	323	366	408
20	1022	451	493	536	578	621	663	706	748	791	833
30	1023	876	918	961	*003	*045	*088	*130	*173	*215	*258
40	1024	010300	342	385	427	470	512	554	597	639	681
50	1025	724	766	809	851	893	936	978	*020	*063	*105
51′ 0	1026	011147	190	232	274	317	359	401	444	486	528
10	1027	570	613	655	697	740	782	824	866	909	951
20	1028	993	*035	*078	*120	*162	*204	*247	*289	*331	*373
30	1029	012415	458	500	542	584	626	669	711	753	795
40	1030	837	879	922	964	*006	*048	*090	*132	*171	*217
50	1031	013259	301	343	385	427	469	511	553	596	638
52′ 0	1032	680	722	764	806	848	890	932	974	*016	*058
10	1033	014100	142	184	226	268	310	353	395	437	479
20	1034	521	563	605	647	689	730	772	814	856	898
30	1035	940	982	*024	*066	*108	*150	*192	*234	*276	*318
40	1036	015360	402	444	485	527	569	611	653	695	737
50	1037	779	821	863	904	946	988	*030	*072	*114	*156
53′ 0	1038	016197	239	281	323	365	407	448	490	532	574
10	1039	616	657	699	741	783	824	866	908	950	992
20	1040	017033	075	117	159	200	242	284	326	367	409
30	1041	451	492	534	576	618	659	701	743	784	826
40	1042	868	909	951	993	*034	*076	*118	*159	*201	*243
50	1043	018281	326	368	409	451	492	534	576	617	659
54′ 0	1044	700	742	784	825	867	908	950	992	*033	*075
10	1045	019116	158	199	241	282	324	366	407	449	490
20	1046	532	573	615	656	698	739	781	822	864	905
30	1047	947	988	*030	*071	*113	*154	*195	*237	*278	*320
40	1048	020361	403	444	486	527	568	610	651	693	734
50	1049	775	817	858	900	941	982	*024	*065	*107	*148
55′ 0	1050	021189	231	272	313	355	396	437	479	520	561
10	1051	603	644	685	727	768	809	851	892	933	974
20	1052	022016	057	098	140	181	222	263	305	346	387
30	1053	428	470	511	552	593	635	676	717	758	799
40	1054	841	882	923	964	*005	*047	*088	*129	*170	*211
50	1055	023252	294	335	376	417	458	499	541	582	623
56′ 0	1056	664	705	746	787	828	870	911	952	993	*034
10	1057	024075	116	157	198	239	280	321	363	404	445
20	1058	486	527	568	609	650	691	732	773	814	855
30	1059	896	937	978	*019	*060	*101	*142	*183	*224	*265
40	1060	025306	347	388	429	470	511	552	593	634	674
50	1061	715	756	797	838	879	920	961	*002	*043	*084
″	N.	0	1	2	3	4	5	6	7	8	9

P. P.	
	44
1	4,4
2	8,8
3	13,2
4	17,6
5	22,0
6	26,4
7	30,8
8	35,2
9	39,6
	43
1	4,3
2	8,6
3	12,9
4	17,2
5	21,5
6	25,8
7	30,1
8	34,4
9	38,7
	42
1	4,2
2	8,4
3	12,6
4	16,8
5	21,0
6	25,2
7	29,4
8	33,6
9	37,8
	41
1	4,1
2	8,2
3	12,3
4	16,4
5	20,5
6	24,6
7	28,7
8	32,8
9	36,9

Corr.

Sin 2°	
47′	∓171
48	173
49	175
50	177
51	179
52	181
53	183
54	186
55	188
56	190
57	192

Tang 2°	
47′	±342
48	346
49	350
50	354
51	358
52	362
53	367
54	371
55	375
56	380
57	384

S. 4,68 5383; T. 4,68 5959 V. 4,68 5575

2°	N.	0	1	2	3	4	5	6	7	8	9
57′ 0″	1062	026125	165	206	247	288	329	370	411	452	492
10	1063	533	571	615	656	697	737	778	819	860	901
20	1064	942	982	*023	*064	*105	*146	*186	*227	*268	*309
30	1065	027350	390	431	472	513	553	591	635	676	716
40	1066	757	798	839	879	920	961	*002	*042	*083	*124
50	1067	028164	205	246	287	327	368	409	449	490	531
58′ 0	1068	571	612	653	693	734	775	815	856	896	937
10	1069	978	*018	*059	*100	*140	*181	*221	*262	*303	*343
20	1070	029384	424	465	506	546	587	627	668	708	749
30	1071	789	830	871	911	952	992	*033	*073	*114	*154
40	1072	030195	235	276	316	357	397	438	478	519	559
50	1073	600	640	681	721	762	802	843	883	923	964
59′ 0	1074	031004	045	085	126	166	206	247	287	328	368
10	1075	408	449	489	530	570	610	651	691	732	772
20	1076	812	853	893	933	974	*014	*054	*095	*135	*175
30	1077	032216	256	296	337	377	417	458	498	538	578
40	1078	619	659	699	740	780	820	860	901	941	981
50	1079	033021	062	102	142	182	223	263	303	343	384
″	N.	0	1	2	3	4	5	6	7	8	9

P.	P.
	41
1	4,1
2	8,2
3	12,3
4	16,4
5	20,5
6	24,6
7	28,7
8	32,8
9	36,9
	40
1	4,0
2	8,0
3	12,0
4	16,0
5	20,0
6	24,0
7	28,0
8	32,0
9	36,0

Corr.	
Sin 2°	
57′	∓192
58	194
59	196
60	199
Tang 2°	
57′	±384
58	388
59	393
60	397

Таблица нѣкоторыхъ случайныхъ Логариѳмовъ.

Лог. 360° или 1296000″ 6,11261
Лог. 24ч. или 86400″ 4,93651
Лог. дуги равной радіусу 5,31443
Лог. окружности π 3,1415927 0,49715
Лог. площади круга при поперечникѣ 1, ... 9,89509
Лог. толстоты шара при поперечникѣ 1, ... 9,71900
Лог. средняго радіуса земли 3268159 тоазовъ 6,51430
Лог. средняго градуса земли 57040 тоазовъ 4,75618
Лог. тропическаго года 365д. 5ч. 48′ 54″ 2,56258
Лог. сидерическаго года 365д. 6ч. 9′ 15″ 2,56260
Лог. суточнаго отступленія равноденственныхъ точекъ, полагая годовое 50″,1 9,13726

II.

ТАБЛИЦЫ ЛОГАРИѲМОВЪ

ТРИГОНОМЕТРИЧЕСКИХЪ ЛИНІЙ

ДЛЯ

ЧЕТВЕРТИ ОКРУЖНОСТИ, ЧРЕЗЪ КАЖДУЮ

МИНУТУ ГРАДУСА.

	Sin	d.	Tang	d.c.	Cotg	Cos	
0′ 0″						0.00000	0″60′
10	5.68557	30103	5.68557	30103	4.31443	0.00000	50
20	5.98660	17610	5.98660	17610	4.01340	0.00000	40
30	6.16270	12493	6.16270	12493	3.83730	0.00000	30
40	6.28763	9691	6.28763	9691	3.71237	0.00000	20
50	6.38454	7919	6.38454	7919	3.61546	0.00000	10
1′ 0	6.46373	6694	6.46373	6694	3.53627	0.00000	0 59′
10	6.53067	5799	6.53067	5799	3.46933	0.00000	50
20	6.58866	5116	6.58866	5116	3.41134	0.00000	40
30	6 63982	4575	6.63982	4575	3.36018	0.00000	30
40	6.68557	4140	6.68557	4140	3.31443	0.00000	20
50	6.72697	3779	6.72697	3779	3.27303	0.00000	10
2′ 0	6.76476	3476	6.76476	3476	3.23524	0 00000	0 58′
10	6.79952	3218	6.79952	3218	3.20048	0.00000	50
20	6.83170	2997	6.83170	2997	3.16830	0.00000	40
30	6.86167	2802	6.86167	2802	3.13833	0.00000	30
40	6.88969	2633	6.88969	2633	3.11031	0.00000	20
50	6.91602	2483	6.91602	2483	3.08398	0.00000	10
3′ 0	6.94085	2348	6.94085	2348	3.05915	0.00000	0 57′
10	6.96433	2227	6.96433	2227	3 03567	0.00000	50
20	6.98660	2119	6 98660	2119	3.01340	0.00000	40
30	7.00779	2021	7.00779	2021	2.99221	0.00000	30
40	7.02800	1930	7.02800	1930	2.97200	0.00000	20
50	7.04730	1849	7.04730	1849	2.95270	0.00000	10
4′ 0	7.06579	1772	7.06579	1773	2.93421	0.00000	0 56′
10	7.08351	1704	7.08352	1703	2.91648	0.00000	50
20	7.10055	1639	7.10055	1639	2 89945	0.00000	40
30	7.11694	1579	7.11694	1579	2.88306	0.00000	30
40	7.13273	1524	7.13273	1524	2.86727	0.00000	20
50	7.14797	1473	7.14797	1473	2.85203	0.00000	10
5′ 0	7.16270	1424	7.16270	1424	2.83730	0.00000	0 55′
10	7.17694	1378	7.17694	1379	2.82306	0.00000	50
20	7.19072	1337	7.19073	1336	2.80927	0.00000	40
30	7.20409	1296	7.20409	1296	2.79591	0 00000	30
40	7.21705	1259	7.21705	1259	2.78295	0 00000	20
50	7.22964	1224	7.22964	1224	2.77036	0.00000	10
6′ 0	7.24188	1190	7.24188	1190	2.75812	0.00000	0 54′
10	7.25378	1158	7.25378	1158	2.74622	0.00000	50
20	7.26536	1128	7.26536	1128	2.73464	0 00000	40
30	7.27664	1099	7.27664	1100	2.72336	0.00000	30
40	7.28763	1073	7.28764	1072	2.71236	0 00000	20
50	7.29836	1046	7.29836	1046	2.70164	0.00000	10
7′ 0	7.30882	1022	7.30882	1022	2.69118	0 00000	0 53′
10	7.31904	999	7.31904	999	2.68096	0.00000	50
20	7.32903	976	7.32903	976	2.67097	0 00000	40
30	7.33879	954	7.33879	954	2.66121	0 00000	30
40	7.34833	934	7.34833	934	2.65167	0 00000	20
50	7.35767	915	7.35767	915	2.64233	0.00000	10
8′ 0	7.36682	895	7.36682	895	2.63318	0.00000	0 52′
10	7.37577	877	7 37577	878	2.62423	0.00000	50
20	7.38454	860	7.38455	860	2.61545	0.00000	40
30	7.39314	844	7 39315	843	2.60685	0.00000	30
40	7.40158	827	7.40158	827	2.59842	0.00000	20
50	7.40985	812	7.40987	812	2.59015	0.00000	10
9′ 0	7.41797	797	7.41797	797	2.58203	0 00000	0 51′
10	7 42594	782	7.42594	782	2 57406	0.00000	50
20	7.43376	769	7.43376	769	2.56624	0 00000	40
30	7.44145	755	7.44145	755	2.55855	0.00000	30
40	7.44900	745	7.44900	743	2.55100	0.00000	20
50	7.45643	730	7.45643	730	2.54357	0.00000	10
10′0″	7.46373		7.46373		2 53627	0.00000	0″50′

	Sin	d.	Tang	d.c.	Cotg	Cos	
10′0″	7.46373	717	7.46373	718	2.53627	0.00000	0″50′
10	7.47090	707	7.47091	706	2.52909	0.00000	50
20	7.47797	694	7.47797	695	2.52203	0.00000	40
30	7.48491	684	7.48492	684	2.51508	0.00000	30
40	7.49175	674	7.49176	673	2.50824	0.00000	20
50	7.49849	663	7.49849	663	2.50151	0.00000	10
11′0	7.50512	653	7.50512	653	2.49488	0.00000	0 49′
10	7.51165	643	7.51165	644	2.48835	0.00000	50
20	7.51808	634	7.51809	634	2.48191	0.00000	40
30	7.52442	625	7.52443	624	2.47557	0.00000	30
40	7.53067	616	7.53067	616	2.46933	0.00000	20
50	7.53683	608	7.53683	608	2.46317	0.00000	10
12′0	7.54291	599	7.54291	599	2.45709	0.00000	0 48′
10	7.54890	591	7.54890	591	2.45110	0 00000	50
20	7.55481	583	7.55481	583	2.44519	0.00000	40
30	7.56064	575	7.56064	575	2.43936	0.00000	30
40	7.56639	567	7.56639	568	2.43361	0.00000	20
50	7.57206	561	7.57207	560	2.42793	0.00000	10
13′0	7.57767	553	7.57767	553	2.42233	0.00000	0 47′
10	7.58320	546	7.58320	547	2.41680	0 00000	50
20	7.58866	540	7.58867	539	2.41133	0 00000	40
30	7.59406	533	7.59406	533	2.40594	0 00000	30
40	7.59939	526	7.59939	527	2.40061	0.00000	20
50	7.60465	520	7.60466	520	2.39534	0.00000	10
14′0	7.60985	514	7.60986	514	2.39014	0.00000	0 46′
10	7.61499	508	7.61500	508	2.38500	0.00000	50
20	7.62007	502	7.62008	502	2.37992	0.00000	10
30	7.62509	497	7.62510	496	2.37490	0 00000	30
40	7.63006	490	7.63006	491	2.36994	0 00000	20
50	7.63496	486	7.63497	485	2.36503	0.00000	10
15′0	7.63982	479	7.63982	480	2.36018	0.00000	0 45′
10	7.64461	475	7.64462	475	2.35538	0.00000	50
20	7.64936	470	7.64937	469	2.35063	0.00000	10
30	7.65406	464	7.65406	465	2.34594	0.00000	30
40	7.65870	460	7.65871	459	2.34129	0.00000	20
50	7.66330	454	7.66330	455	2.33670	0.00000	10
16′0	7.66784	451	7.66785	450	2.33215	0 00000	0 44′
10	7.67235	445	7.67235	445	2.32765	0.00000	50
20	7.67680	441	7.67680	441	2 32320	0 00000	40
30	7.68121	436	7.68121	437	2.31879	9.99999	30
40	7.68557	432	7.68558	432	2.31442	9.99999	20
50	7.68989	428	7.68990	428	2 31010	9 99999	10
17′0	7 69417	424	7.69118	424	2.30582	9 99999	0 43′
10	7.69841	420	7.69842	419	2.30158	9.99999	50
20	7.70261	415	7.70261	416	2.29739	9 99999	40
30	7.70676	412	7.70677	411	2 29323	9.99999	30
40	7 71088	408	7.71088	408	2.28912	9 99999	20
50	7.71496	404	7.71496	404	2.28504	9.99999	10
18′0	7.71900	400	7.71900	401	2.28100	9.99999	0 42′
10	7.72300	397	7.72301	396	2.27699	9.99999	0
20	7.72697	393	7.72697	393	2.27303	9.99999	0
30	7.73090	389	7.73090	390	2.26910	9.99999	0
40	7.73479	386	7.73480	386	2 26520	9.99999	20
50	7.73865	383	7.73866	382	2.26134	9.99999	10
19′0	7.74248	379	7.74248	380	2.25752	9.999990	0 41′
10	7.74627	376	7.74628	376	2.25372	9.99999	50
20	7.75003	373	7.75004	373	2.24996	9.99999	40
30	7.75376	369	7.75377	369	2.24623	9.99999	30
40	7.75745	367	7.75746	367	2.24254	9.99999	20
50	7.76112	363	7.76113	363	2.23887	9.99999	10
20′0″	7.76475		7.76476		2.23524	9.999990	0″40′

	Cos	d.	Colg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
20′ 0″	7.76475		7.76476		2.23524	9.99999	0″ 40′	30′ 0″	7.94084		7.94086		2.05914	9.99998	0″ 30′
10	7.76836	361	7.76837	361	2.23163	9.99999	50	10	7.94325	241	7.94326	240	2.05674	9.99998	50
20	7.77193	357	7.77194	357	2.22806	9.99999	40	20	7.94564	239	7.94566	240	2.05434	9.99998	40
30	7.77548	355	7.77549	355	2.22451	9.99999	30	30	7.94802	238	7.94804	238	2.05196	9.99998	30
40	7.77899	351	7.77900	351	2.22100	9.99999	20	40	7.95039	237	7.95040	236	2.04960	9.99998	20
50	7.78248	349	7.78249	349	2.21751	9.99999	10	50	7.95274	235	7.95276	236	2.04724	9.99998	10
		346		346						234		234			
21′ 0	7.78594		7.78595		2.21405	9.99999	0 39′	31′ 0	7.95508		7.95510		2.04490	9.99998	0 29′
10	7.78938	344	7.78938	343	2.21062	9.99999	50	10	7.95741	233	7.95743	233	2.04257	9.99998	50
20	7.79278	340	7.79279	341	2.20721	9.99999	40	20	7.95973	232	7.95974	231	2.04026	9.99998	40
30	7.79616	338	7.79617	338	2.20383	9.99999	30	30	7.96203	230	7.96205	231	2.03795	9.99998	30
40	7.79952	336	7.79952	335	2.20048	9.99999	20	40	7.96432	229	7.96434	229	2.03566	9.99998	20
50	7.80284	332	7.80285	333	2.19715	9.99999	10	50	7.96660	228	7.96662	228	2.03338	9.99998	10
		331		330						227		227			
22′ 0	7.80615		7.80615		2.19385	9.99999	0 38′	32′ 0	7.96887		7.96889		2.03111	9.99998	0 28′
10	7.80942	327	7.80943	328	2.19057	9.99999	50	10	7.97113	226	7.97114	225	2.02886	9.99998	50
20	7.81268	326	7.81269	326	2.18731	9.99999	40	20	7.97337	224	7.97339	225	2.02661	9.99998	40
30	7.81591	323	7.81591	322	2.18409	9.99999	30	30	7.97560	223	7.97562	223	2.02438	9.99998	30
40	7.81911	320	7.81912	321	2.18088	9.99999	20	40	7.97782	222	7.97784	222	2.02216	9.99998	20
50	7.82229	318	7.82230	318	2.17770	9.99999	10	50	7.98003	221	7.98005	221	2.01995	9.99998	10
		316		316						220		220			
23′ 0	7.82545		7.82546		2.17454	9.99999	0 37′	33′ 0	7.98223		7.98225		2.01775	9.99998	0 27′
10	7.82859	314	7.82860	314	2.17140	9.99999	50	10	7.98442	219	7.98444	219	2.01556	9.99998	50
20	7.83170	311	7.83171	311	2.16829	9.99999	40	20	7.98660	218	7.98662	218	2.01338	9.99998	40
30	7.83479	309	7.83480	309	2.16520	9.99999	30	30	7.98876	216	7.98878	216	2.01122	9.99998	30
40	7.83786	307	7.83787	307	2.16213	9.99999	20	40	7.99092	216	7.99094	216	2.00906	9.99998	20
50	7.84091	305	7.84092	305	2.15908	9.99999	10	50	7.99306	214	7.99308	214	2.00692	9.99998	10
		302		302						214		214			
24′ 0	7.84393		7.84394		2.15606	9.99999	0 36′	34′ 0	7.99520		7.99522		2.00478	9.99998	0 26′
10	7.84694	301	7.84695	301	2.15305	9.99999	50	10	7.99732	212	7.99734	212	2.00266	9.99998	50
20	7.84992	298	7.84993	298	2.15007	9.99999	40	20	7.99943	211	7.99946	212	2.00054	9.99998	40
30	7.85289	297	7.85290	297	2.14710	9.99999	30	30	8.00154	211	8.00156	210	1.99844	9.99998	30
40	7.85583	294	7.85584	294	2.14416	9.99999	20	40	8.00363	209	8.00365	209	1.99635	9.99998	20
50	7.85876	293	7.85877	293	2.14123	9.99999	10	50	8.00571	208	8.00574	209	1.99426	9.99998	10
		290		290						208		207			
25′ 0	7.86166		7.86167		2.13833	9.99999	0 35′	35′ 0	8.00779		8.00781		1.99219	9.99998	0 25′
10	7.86455	289	7.86456	289	2.13544	9.99999	50	10	8.00985	206	8.00987	206	1.99013	9.99998	50
20	7.86741	286	7.86743	287	2.13257	9.99999	40	20	8.01190	205	8.01193	206	1.98807	9.99998	40
30	7.87026	285	7.87027	284	2.12973	9.99999	30	30	8.01395	205	8.01397	204	1.98603	9.99998	30
40	7.87309	283	7.87310	283	2.12690	9.99999	20	40	8.01598	203	8.01600	203	1.98400	9.99998	20
50	7.87590	281	7.87591	281	2.12409	9.99999	10	50	8.01801	203	8.01803	201	1.98197	9.99998	10
		280		280						201					
26′ 0	7.87870		7.87871		2.12129	9.99999	0 31′	36′ 0	8.02002		8.02004		1.97996	9.99998	0 24′
10	7.88147	277	7.88148	277	2.11852	9.99999	50	10	8.02203	201	8.02205	201	1.97795	9.99998	50
20	7.88423	276	7.88424	276	2.11576	9.99999	40	20	8.02402	199	8.02405	200	1.97595	9.99998	40
30	7.88697	274	7.88698	274	2.11302	9.99999	30	30	8.02601	199	8.02604	199	1.97396	9.99998	30
40	7.88969	272	7.88970	272	2.11030	9.99999	20	40	8.02799	198	8.02801	197	1.97199	9.99998	20
50	7.89240	271	7.89241	271	2.10759	9.99999	10	50	8.02996	197	8.02998	197	1.97002	9.99998	10
		269		269						196		196			
27′ 0	7.89509		7.89510		2.10490	9.99999	0 33′	37′ 0	8.03192		8.03194		1.96806	9.99997	0 23′
10	7.89776	267	7.89777	267	2.10223	9.99999	50	10	8.03387	195	8.03390	196	1.96610	9.99997	50
20	7.90041	265	7.90043	266	2.09957	9.99999	40	20	8.03581	194	8.03584	194	1.96416	9.99997	40
30	7.90305	264	7.90307	264	2.09693	9.99999	30	30	8.03775	194	8.03777	193	1.96223	9.99997	30
40	7.90568	263	7.90569	262	2.09431	9.99999	20	40	8.03967	192	8.03970	193	1.96030	9.99997	20
50	7.90829	261	7.90830	261	2.09170	9.99999	10	50	8.04159	192	8.04162	192	1.95838	9.99997	10
		259		259						191		191			
28′ 0	7.91088		7.91089		2.08911	9.99999	0 32′	38′ 0	8.04350		8.04353		1.95647	9.99997	0 22′
10	7.91346	258	7.91347	258	2.08653	9.99999	50	10	8.04540	190	8.04543	190	1.95457	9.99997	50
20	7.91602	256	7.91603	256	2.08397	9.99999	40	20	8.04729	189	8.04732	189	1.95268	9.99997	40
30	7.91857	255	7.91858	255	2.08142	9.99999	30	30	8.04918	189	8.04921	187	1.95079	9.99997	30
40	7.92110	253	7.92111	253	2.07889	9.99998	20	40	8.05105	187	8.05108	187	1.94892	9.99997	20
50	7.92362	252	7.92363	252	2.07637	9.99998	10	50	8.05292	187	8.05295	186	1.94705	9.99997	10
		250		250						186					
29′ 0	7.92612		7.92613		2.07387	9.99998	0 31′	39′ 0	8.05478		8.05481		1.94519	9.99997	0 21′
10	7.92861	249	7.92862	249	2.07138	9.99998	50	10	8.05663	185	8.05666	185	1.94334	9.99997	50
20	7.93108	247	7.93110	248	2.06890	9.99998	40	20	8.05848	185	8.05851	183	1.94149	9.99997	40
30	7.93354	246	7.93356	246	2.06644	9.99998	30	30	8.06031	183	8.06034	183	1.93966	9.99997	30
40	7.93599	245	7.93601	245	2.06399	9.99998	20	40	8.06214	183	8.06217	182	1.93783	9.99997	20
50	7.93842	243	7.93844	243	2.06156	9.99998	10	50	8.06396	182	8.06399	182	1.93601	9.99997	10
		242		242											
30′ 0″	7.94084		7.94086		2.05914	9.99998	0″ 30′	40′ 0″	8.06578		8.06581		1.93419	9.99997	0″ 20′
	Cos	d.	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
10'0"	8.06578	180	8.06581	180	1.93419	9.99997	0"20	50'0"	8.16268	145	8.16273	144	1.83727	9.99995	0"10'
10	8.06758	180	8.06761	180	1.93239	9.99997	50	10	8.16413	144	8.16417	144	1.83583	9.99995	50
20	8.06938	179	8.06941	179	1.93059	9.99997	40	20	8.16557	143	8.16561	144	1.83439	9.99995	40
30	8.07117	178	8.07120	178	1.92880	9.99997	30	30	8.16700	143	8.16705	143	1.83295	9.99995	30
40	8.07295	178	8.07298	178	1.92702	9.99997	20	40	8.16843	143	8.16848	143	1.83152	9.99995	20
50	8.07473	177	8.07476	177	1.92524	9.99997	10	50	8.16986	142	8.16991	142	1.83009	9.99995	10
41'0	8.07650	176	8.07653	176	1.92347	9.99997	0 19'	51'0	8.17128	142	8.17133	142	1.82867	9.99995	0 9'
10	8.07826	176	8.07829	176	1.92171	9.99997	50	10	8.17270	141	8.17275	141	1.82725	9.99995	50
20	8.08002	174	8.08005	175	1.91995	9.99997	40	20	8.17411	141	8.17416	141	1.82584	9.99995	40
30	8.08176	174	8.08180	174	1.91820	9.99997	30	30	8.17552	140	8.17557	140	1.82443	9.99995	30
40	8.08350	174	8.08354	173	1.91646	9.99997	20	40	8.17692	140	8.17697	140	1.82303	9.99995	20
50	8.08524	172	8.08527	173	1.91473	9.99997	10	50	8.17832	139	8.17837	139	1.82163	9.99995	10
12'0	8.08696	172	8.08700	172	1.91300	9.99997	0 18'	52'0	8.17971	139	8.17976	139	1.82024	9.99995	0 8'
10	8.08868	172	8.08872	171	1.91128	9.99997	50	10	8.18110	139	8.18115	139	1.81885	9.99995	50
20	8.09040	170	8.09043	171	1.90957	9.99997	40	20	8.18249	138	8.18254	138	1.81746	9.99995	40
30	8.09210	170	8.09214	170	1.90786	9.99997	30	30	8.18387	137	8.18392	138	1.81608	9.99995	30
40	8.09380	170	8.09384	169	1.90616	9.99997	20	40	8.18524	138	8.18530	137	1.81470	9.99995	20
50	8.09550	168	8.09553	169	1.90447	9.99997	10	50	8.18662	136	8.18667	137	1.81333	9.99995	10
43'0	8.09718	168	8.09722	168	1.90278	9.99997	0 17'	53'0	8.18798	137	8.18804	136	1.81196	9.99995	0 7'
10	8.09886	168	8.09890	167	1.90110	9.99997	50	10	8.18935	136	8.18940	136	1.81060	9.99995	50
20	8.10054	166	8.10057	167	1.89943	9.99997	40	20	8.19071	135	8.19076	135	1.80924	9.99995	40
30	8.10220	166	8.10224	166	1.89776	9.99997	30	30	8.19206	135	8.19211	136	1.80789	9.99995	30
40	8.10386	166	8.10390	165	1.89610	9.99996	20	40	8.19341	135	8.19347	134	1.80653	9.99995	20
50	8.10552	165	8.10555	165	1.89445	9.99996	10	50	8.19476	134	8.19481	135	1.80519	9.99995	10
44'0	8.10717	164	8.10720	164	1.89280	9.99996	0 16'	54'0	8.19610	134	8.19616	133	1.80384	9.99995	0 6'
10	8.10881	163	8.10884	164	1.89116	9.99996	50	10	8.19744	133	8.19749	134	1.80251	9.99995	50
20	8.11044	163	8.11048	163	1.88952	9.99996	40	20	8.19877	133	8.19883	133	1.80117	9.99995	40
30	8.11207	163	8.11211	162	1.88789	9.99996	30	30	8.20010	133	8.20016	133	1.79984	9.99995	30
40	8.11370	161	8.11373	162	1.88627	9.99996	20	40	8.20143	132	8.20149	132	1.79851	9.99995	20
50	8.11531	162	8.11535	161	1.88465	9.99996	10	50	8.20275	132	8.20281	132	1.79719	9.99994	10
45'0	8.11693	160	8.11696	161	1.88304	9.99996	0 15'	55'0	8.20407	131	8.20413	131	1.79587	9.99994	0 5'
10	8.11853	160	8.11857	160	1.88143	9.99996	50	10	8.20538	131	8.20544	131	1.79456	9.99994	30
20	8.12013	159	8.12017	159	1.87983	9.99996	40	20	8.20669	131	8.20675	131	1.79325	9.99994	40
30	8.12172	159	8.12176	159	1.87824	9.99996	30	30	8.20800	130	8.20806	130	1.79194	9.99994	30
40	8.12331	158	8.12335	158	1.87665	9.99996	20	40	8.20930	130	8.20936	130	1.79064	9.99994	20
50	8.12489	158	8.12493	158	1.87507	9.99996	10	50	8.21060	129	8.21066	129	1.78934	9.99994	10
46'0	8.12647	157	8.12651	157	1.87349	9.99996	0 14'	56'0	8.21189	130	8.21195	129	1.78805	9.99994	0 4'
10	8.12804	157	8.12808	157	1.87192	9.99996	50	10	8.21319	128	8.21324	129	1.78676	9.99994	50
20	8.12961	156	8.12965	156	1.87035	9.99996	40	20	8.21447	129	8.21453	128	1.78547	9.99994	40
30	8.13117	155	8.13121	155	1.86879	9.99996	30	30	8.21576	127	8.21581	128	1.78419	9.99994	30
40	8.13272	155	8.13276	155	1.86724	9.99996	20	40	8.21703	128	8.21709	128	1.78291	9.99994	20
50	8.13427	154	8.13431	154	1.86569	9.99996	10	50	8.21831	127	8.21837	127	1.78163	9.99994	10
47'0	8.13581	154	8.13585	154	1.86415	9.99996	0 13'	57'0	8.21958	127	8.21964	127	1.78036	9.99994	0 3'
10	8.13735	153	8.13739	153	1.86261	9.99996	50	10	8.22085	126	8.22091	126	1.77909	9.99994	50
20	8.13888	153	8.13892	153	1.86108	9.99996	40	20	8.22211	126	8.22217	126	1.77783	9.99994	40
30	8.14041	152	8.14045	152	1.85955	9.99996	30	30	8.22337	126	8.22343	126	1.77657	9.99994	30
40	8.14193	151	8.14197	151	1.85803	9.99996	20	40	8.22463	125	8.22469	126	1.77531	9.99994	20
50	8.14344	151	8.14348	152	1.85652	9.99996	10	50	8.22588	125	8.22595	125	1.77405	9.99994	10
48'0	8.14495	151	8.14500	150	1.85500	9.99996	0 12'	58'0	8.22713	125	8.22720	124	1.77280	9.99994	0 2'
10	8.14646	150	8.14650	150	1.85350	9.99996	50	10	8.22838	124	8.22844	124	1.77156	9.99994	50
20	8.14796	149	8.14800	150	1.85200	9.99996	40	20	8.22962	124	8.22968	124	1.77032	9.99994	40
30	8.14945	149	8.14950	149	1.85050	9.99996	30	30	8.23086	124	8.23092	124	1.76908	9.99994	30
40	8.15094	149	8.15099	148	1.84901	9.99996	20	40	8.23210	123	8.23216	123	1.76784	9.99994	20
50	8.15243	148	8.15247	148	1.84753	9.99996	10	50	8.23333	123	8.23339	123	1.76661	9.99994	10
49'0	8.15391	147	8.15395	148	1.84605	9.99996	0 11'	59'0	8.23456	122	8.23462	123	1.76538	9.99994	0 1'
10	8.15538	147	8.15543	147	1.84457	9.99996	50	10	8.23578	122	8.23585	122	1.76415	9.99994	50
20	8.15685	147	8.15690	146	1.84310	9.99996	40	20	8.23700	122	8.23707	122	1.76293	9.99994	40
30	8.15832	146	8.15836	146	1.84164	9.99995	30	30	8.23822	122	8.23829	121	1.76171	9.99993	30
40	8.15978	145	8.15982	146	1.84018	9.99995	20	40	8.23944	121	8.23950	121	1.76050	9.99993	20
50	8.16123	145	8.16128	145	1.83872	9.99995	10	50	8.24065	121	8.24071	121	1.75929	9.99993	10
50'0"	8.16268		8.16273		1.83727	9.99995	0" 10'	60'0"	8.24186		8.24192		1.75808	9.99993	0" 0'
	Cos	d.	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
0′ 0″	8.24186	120	8.24192	121	1.75808	9.99993	0″60′	10′ 0″	8.30879	104	8 30888	104	1.69112	9.99991	0″ 50′
10	8.24306	120	8.24313	120	1.75687	9.99993	50	10	8.30983	103	8.30992	103	1.69008	9.99991	50
20	8.24426	120	8 24433	120	1.75567	9.99993	40	20	8.31086	102	8.31095	103	1.68905	9.99991	40
30	8.24546	119	8 24553	119	1.75447	9.99993	30	30	8.31188	103	8.31198	102	1.68802	9.99991	30
40	8.24665	120	8 24672	119	1.75328	9.99993	20	40	8.31291	102	8 31300	103	1.68700	9.99991	20
50	8.24785	118	8 24791	119	1.75209	9.99993	10	50	8.31393	102	8.31403	102	1.68597	9.99991	10
1′0	8.24903	119	8 24910	119	1.75090	9.99993	059′	11′0	8.31495	102	8.31505	101	1.68495	9.99991	049′
10	8.25022	118	8.25029	118	1.74971	9.99993	50	10	8.31597	102	8.31606	102	1.68394	9.99991	50
20	8.25140	118	8 25147	118	1.74853	9.99993	40	20	8.31699	101	8 31708	101	1.68292	9.99991	40
30	8.25258	117	8.25265	117	1.74735	9.99993	30	30	8.31800	101	8.31809	102	1.68191	9.99991	30
40	8.25375	118	8.25382	118	1.74618	9.99993	20	40	8.31901	101	8.31911	101	1.68089	9.99991	20
50	8.25493	116	8.25500	116	1.74500	9.99993	10	50	8.32002	101	8.32012	100	1.67988	9.99991	10
2′0	8.25609	117	8.25616	117	1.74384	9.99993	058′	12′0	8.32103	100	8.32112	101	1 67888	9.99990	048′
10	8.25726	116	8.25733	116	1.74267	9.99993	50	10	8 32203	100	8.32213	100	1.67787	9.99990	50
20	8.25842	116	8.25849	116	1.74151	9.99993	40	20	8.32303	100	8.32313	100	1.67687	9.99990	40
30	8.25958	116	8.25965	116	1.74035	9.99993	30	30	8 32403	100	8.32413	100	1.67587	9 99990	30
40	8.26074	115	8.26081	115	1.73919	9.99993	20	40	8.32503	99	8 32513	99	1.67487	9.99990	20
50	8.26189	115	8.26196	116	1.73804	9.99993	10	50	8.32602	100	8.32612	99	1.67388	9.99990	10
3′0	8.26304	115	8.26312	114	1.73688	9.99993	057′	13′0	8.32702	99	8.32711	99	1.67289	9.99990	047′
10	8.26419	114	8.26426	115	1.73574	9.99993	50	10	8.32801	98	8.32810	99	1.67190	9.99990	50
20	8.26533	115	8.26541	114	1.73459	9.99993	40	20	8.32899	99	8.32909	99	1.67091	9.99990	40
30	8.26648	113	8.26655	114	1.73345	9.99993	30	30	8.32998	98	8 33008	98	1.66992	9.99990	30
40	8.26761	114	8.26769	113	1.73231	9.99993	20	40	8.33096	99	8.33106	99	1.66894	9.99990	20
50	8.26875	113	8 26882	114	1.73118	9.99993	10	50	8.33195	97	8.33205	97	1.66795	9.99990	10
4′0	8.26988	113	8.26996	113	1.73004	9 99992	056′	14′0	8.33292	98	8.33302	98	1.66698	9.99990	046′
10	8.27101	113	8.27109	112	1.72891	9.99992	50	10	8.33390	98	8.33400	98	1.66600	9.99990	50
20	8.27214	112	8.27221	113	1.72779	9.99992	40	20	8.33488	97	8.33498	97	1.66502	9.99990	40
30	8.27326	112	8.27334	112	1.72666	9 99992	30	30	8 33585	97	8 33595	97	1.66405	9.99990	30
40	8.27438	112	8.27446	112	1.72554	9.99992	20	40	8 33682	97	8.33692	97	1.66308	9.99990	20
50	8.27550	111	8.27558	111	1.72442	9.99992	10	50	8.33779	96	8 33789	97	1.66211	9 99990	10
5′0	8.27661	112	8.27669	111	1.72331	9.99992	055′	15′0	8.33875	97	8.33886	96	1.66114	9.99990	045′
10	8 27773	110	8.27780	111	1.72220	9.99992	50	10	8 33972	96	8.33982	96	1.66018	9.99990	50
20	8 27883	111	8 27891	111	1.72109	9.99992	40	20	8.34068	96	8 34078	96	1.65922	9.99990	40
30	8 27994	110	8.28002	110	1.71998	9.99992	30	30	8.34161	96	8.34174	96	1.65826	9.99990	30
40	8.28104	111	8.28112	111	1.71888	9 99992	20	40	8 34260	95	8 34270	96	1.65730	9.99989	20
50	8.28215	109	8.28223	109	1.71777	9.99992	10	50	8 34355	95	8 34366	95	1.65634	9.99989	10
6′0	8 28324	110	8 28332	110	1.71668	9.99992	051′	16′0	8 34450	96	8.34461	95	1.65539	9.99989	044′
10	8 28434	109	8.28442	109	1.71558	9.99992	50	10	8.34546	94	8.34556	95	1.65444	9.99989	50
20	8 28543	109	8.28551	109	1.71449	9.99992	40	20	8.34640	95	8.34651	95	1.65349	9.99989	40
30	8.28652	109	8 28660	109	1 71340	9.99992	30	30	8.34735	95	8 34746	94	1.65254	9,99989	30
40	8.28761	108	8.28769	108	1.71231	9.99992	20	40	8.34830	94	8 34840	95	1.65160	9.99989	20
50	8 28869	108	8 28877	109	1.71123	9.99992	10	50	8.34924	94	8 34935	94	1.65065	9.99989	10
7′0	8.28977	108	8 28986	108	1.71014	9.99992	053′	17′0	8.35018	94	8.35029	94	1.64971	9.99989	043′
10	8.29085	108	8 29094	107	1.70906	9.99992	50	10	8 35112	94	8.35123	94	1.64877	9.99989	50
20	8 29193	107	8.29201	108	1.70799	9.99992	40	20	8.35206	93	8 35217	93	1 64783	9.99989	40
30	8 29300	107	8.29309	107	1.70691	9.99992	30	30	8 35299	93	8.35310	93	1.64690	9.99989	30
40	8.29407	107	8.29416	107	1.70584	9 99992	20	40	8 35392	93	8.35403	94	1.64597	9.99989	20
50	8.29514	107	8 29523	106	1.70477	9.99992	10	50	8 35485	93	8 35497	93	1.64503	9.99989	10
8′0	8.29621	106	8.29629	107	1.70371	9 99992	052′	18′0	8.35578	93	8.35590	92	1 64410	9.99989	042′
10	8.29727	106	8 29736	106	1.70264	9.99991	50	10	8.35671	93	8.35682	93	1.64318	9.99989	50
20	8.29833	106	8.29842	105	1.70158	9.99991	40	20	8.35764	92	8.35775	92	1.64225	9.99989	40
30	8 29939	105	8.29947	106	1.70053	9.99991	30	30	8.35856	92	8.35867	92	1.64133	9 99989	30
40	8.30044	106	8.30053	105	1.69947	9 99991	20	40	8.35948	92	8 35959	92	1.64041	9.99989	20
50	8.30150	105	8.30158	105	1.69842	9.99991	10	50	8.36040	91	8.36051	92	1.63949	9.99989	10
9′0	8 30255	104	8.30263	105	1.69737	9.99991	051′	19′0	8.36131	92	8.36143	92	1.63857	9.99989	041′
10	8.30359	105	8.30368	105	1.69632	9.99991	50	10	8 36223	91	8.36235	91	1.63765	9 99988	50
20	8.30464	104	8.30473	104	1.69527	9.99991	40	20	8.36314	91	8 36326	91	1.63674	9.99988	40
30	8.30568	104	8.30577	104	1 69423	9 99991	30	30	8.36405	91	8.36417	91	1.63583	9.99988	30
40	8 30672	104	8.30681	104	1.69319	9.99991	20	40	8 36496	91	8.36508	91	1.63492	9.99988	20
50	8.30776	103	8.30785	103	1.69215	9.99991	10	50	8.36587	91	8.36599	90	1.63401	9.99988	10
10′0″	8.30879		8.30888		1.69112	9.99991	0″ 50′	20′ 0″	8.36678		8 36689		1.63311	9.99988	0″ 40′
	Cos	d.	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos	
20′0″	8.36678	90	8.36689	91	1.63311	9.99988	0″40′
10	8.36768	90	8.36780	90	1.63220	9.99988	50
20	8.36858	90	8.36870	90	1.63130	9.99988	40
30	8.36948	90	8.36960	90	1.63040	9.99988	30
40	8.37038	90	8.37050	90	1.62950	9.99988	20
50	8.37128	89	8.37140	89	1.62860	9.99988	10
21′0	8.37217	89	8.37229	89	1.62771	9.99988	0 39′
10	8.37306	89	8.37318	90	1.62682	9.99988	50
20	8.37395	89	8.37408	89	1.62592	9.99988	40
30	8 37484	89	8-37497	88	1.62503	9.99988	30
40	8.37573	89	8.37585	89	1.62415	9.99988	20
50	8.37662	88	8.37674	88	1.62326	9.99988	10
22′0	8.37750	88	8.37762	88	1.62238	9.99988	0 38′
10	8.37838	88	8.37850	88	1.62150	9.99988	50
20	8.37926	88	8.37938	88	1.62062	9.99988	40
30	8.38014	87	8.38026	88	1.61974	9.99987	30
40	8.38101	88	8.38114	88	1.61886	9.99987	20
50	8.38189	87	8.38202	87	1.61798	9.99987	10
23′0	8.38276	87	8.38289	87	1.61711	9.99987	0 37′
10	8.38363	87	8.38376	87	1.61624	9.99987	50
20	8.38450	87	8.38463	87	1.61537	9.99987	40
30	8.38537	87	8.38550	86	1.61450	9.99987	30
40	8.38624	86	8.38636	87	1.61364	9.99987	20
50	8.38710	86	8.38723	86	1.61277	9.99987	10
24′0	8.38796	86	8.38809	86	1.61191	9.99987	0 36′
10	8.38882	86	8.38895	86	1.61105	9.99987	50
20	8.38968	86	8.38981	86	1.61019	9.99987	40
30	8 39054	85	8.39067	86	1.60933	9.99987	30
40	8.39139	86	8.39153	85	1.60847	9.99987	20
50	8.39225	85	8.39238	85	1.60762	9.99987	10
25′0	8.39310	85	8.39323	85	1.60677	9.99987	0 35′
10	8.39395	85	8.39408	85	1.60592	9.99987	50
20	8.39480	85	8.39493	85	1.60507	9.99987	40
30	8.39565	84	8.39578	85	1.60422	9.99987	30
40	8.39649	85	8.39663	84	1.60337	9.99987	20
50	8.39734	84	8.39747	85	1.60253	9.99986	10
26′0	8.39818	84	8.39832	84	1.60168	9.99986	0 34′
10	8.39902	84	8.39916	84	1.60084	9.99986	50
20	8.39986	84	8.40000	83	1.60000	9.99986	40
30	8 40070	83	8.40083	84	1.59917	9.99986	30
40	8.40153	84	8.40167	83	1.59833	9.99986	20
50	8.40237	83	8.40250	84	1.59750	9.99986	10
27′0	8.40320	83	8.40334	83	1.59666	9.99986	0 33′
10	8.40403	83	8.40417	83	1.59583	9.99986	50
20	8.40486	83	8.40500	83	1.59500	9.99986	40
30	8.40569	82	8.40583	82	1.59417	9.99986	30
40	8.40651	83	8.40665	83	1.59335	9.99986	20
50	8.40734	82	8.40748	82	1.59252	9.99986	10
28′0	8.40816	82	8.40830	83	1.59170	9.99986	0 32′
10	8.40898	82	8.40913	82	1.59087	9.99986	50
20	8.40980	82	8.40995	82	1.59005	9.99986	40
30	8.41062	82	8.41077	81	1.58923	9.99986	30
40	8.41144	81	8.41158	82	1.58842	9.99986	20
50	8.41225	82	8.41240	81	1.58760	9.99985	10
29′0	8.41307	81	8.41321	82	1.58679	9.99985	0 31′
10	8.41388	81	8.41403	81	1.58597	9.99985	50
20	8.41469	81	8.41484	81	1.58516	9.99985	40
30	8.41550	81	8.41565	81	1.58435	9.99985	30
40	8.41631	80	8.41646	80	1.58354	9.99985	20
50	8.41711	81	8.41726	81	1.58274	9.99985	10
30′0″	8.41792		8 41807		1.58193	9.99985	0″30′
	Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos	
30′ 0″	8.41792	80	8.41807	80	1.58193	9.99985	0″ 30′
10	8.41872	80	8.41887	80	1.58113	9.99985	50
20	8.41952	80	8.41967	81	1.58033	9.99985	40
30	8.42032	80	8.42048	79	1.57952	9.99985	30
40	8.42112	80	8.42127	80	1.57873	9.99985	20
50	8.42192	80	8.42207	80	1.57793	9.99985	10
31′0	8.42272	79	8.42287	79	1.57713	9.99985	0 29′
10	8.42351	79	8.42366	80	1.57634	9.99985	50
20	8.42430	80	8.42446	79	1.57554	9.99985	40
30	8.42510	79	8.42525	79	1.57475	9.99985	30
40	8.42589	78	8.42604	79	1.57396	9.99985	20
50	8.42667	79	8.42683	79	1.57317	9.99985	10
32′0	8·42746	79	8.42762	78	1.57238	9.99984	0 28′
10	8.42825	78	8.42840	79	1.57160	9.99984	50
20	8.42903	79	8.42919	78	1.57081	9.99984	40
30	8.42982	78	8.42997	78	1.57003	9.99984	30
40	8.43060	78	8.43075	79	1.56925	9.99984	20
50	8.43138	78	8.43154	78	1.56846	9.99984	10
33′0	8.43216	77	8.43232	77	1.56768	9.99984	0 27′
10	8.43293	78	8.43309	78	1.56691	9.99984	50
20	8.43371	77	8.43387	77	1.56613	9.99984	40
30	8.43448	78	8.43464	78	1.56536	9.99984	30
40	8.43526	77	8.43542	77	1.56458	9.99984	20
50	8.43603	77	8.43619	77	1.56381	9.99984	10
34′0	8.43680	77	8.43696	77	1.56304	9.99984	0 26′
10	8.43757	77	8.43773	77	1.56227	9.99984	50
20	8.43834	76	8.43850	77	1.56150	9.99984	40
30	8.43910	77	8.43927	76	1.56073	9.99984	30
40	8.43987	76	8.44003	77	1.55997	9.99984	20
50	8.44063	76	8.44080	76	1.55920	9.99983	10
35′0	8.44139	77	8.44156	76	1.55844	9.99983	0 25′
10	8.44216	76	8.44232	76	1.55768	9.99983	50
20	8.44292	75	8.44308	76	1.55692	9.99983	40
30	8.44367	76	8.44384	76	1.55616	9.99983	30
40	8.44443	76	8.44460	76	1.55540	9.99983	20
50	8.44519	75	8.44536	75	1.55464	9.99983	10
36′0	8.44594	75	8.44611	75	1.55389	9.99983	0 24′
10	8.44669	76	8.44686	75	1.55314	9.99983	50
20	8.44745	75	8.44762	76	1.55238	9.99983	40
30	8.44820	75	8.44837	75	1.55163	9.99983	30
40	8.44895	74	8.44912	75	1.55088	9.99983	20
50	8.44969	75	8.44987	74	1.55013	9.99983	10
37′0	8.45044	75	8.45061	75	1.54939	9.99983	0 23′
10	8.45119	74	8.45136	74	1.54864	9.99983	50
20	8.45193	74	8.45210	75	1.54790	9.99983	40
30	8.45267	74	8.45285	74	1.54715	9.99983	30
40	8.45341	74	8.45359	74	1.54641	9.99982	20
50	8.45415	74	8.45433	74	1.54567	9.99982	10
38′0	8.45489	74	8.45507	74	1.54493	9.99982	0 22′
10	8.45563	74	8.45581	74	1.54419	9.99982	50
20	8.45637	73	8.45655	73	1.54345	9.99982	40
30	8.45710	74	8.45728	74	1.54272	9.99982	30
40	8.45784	73	8.45802	73	1.54198	9.99982	20
50	8.45857	73	8 45875	73	1.54125	9.99982	10
39′0	8.45930	73	8.45948	73	1.54052	9.99982	0 21′
10	8.46003	73	8.46021	73	1.53979	9.99982	50
20	8.46076	73	8.46094	73	1.53906	9.99982	40
30	8.46149	73	8.46167	73	1.53833	9.99982	30
40	8.46222	72	8.46240	72	1.53760	9.99982	20
50	8.46294	72	8.46312	73	1.53688	9.99982	10
40′0″	8.46366		8.46385		1.53615	9.99982	0″ 20′
	Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
10′ 0″	8.46366	73	8.46385	72	1.53615	9.99982	0″ 20′	50′ 0″	8.50504	66	8.50527	66	1.49473	9.99978	0″ 10′
10	8.46439	72	8.46457	72	1.53543	9.99982	50	10	8.50570	66	8.50593	65	1.49407	9.99978	50
20	8.46511	72	8.46529	73	1.53471	9.99982	40	20	8.50636	65	8.50658	66	1.49342	9.99978	40
30	8.46583	72	8.46602	72	1.53398	9.99981	30	30	8.50701	66	8.50724	65	1.49276	9.99978	30
40	8.46655	72	8.46674	71	1.53326	9.99981	20	40	8.50767	65	8.50789	66	1.49211	9.99977	20
50	8.46727	72	8.46745	72	1.53255	9.99981	10	50	8.50832	65	8.50855	65	1.49145	9.99977	10
11′ 0	8.46799	71	8.46817	72	1.53183	9.99981	0 19′	51′ 0	8.50897	66	8.50920	65	1.49080	9.99977	0 9′
10	8.46870	72	8.46889	71	1.53111	9.99981	50	10	8.50963	65	8.50985	65	1.49015	9.99977	50
20	8.46942	71	8.46960	72	1.53040	9.99981	40	20	8.51028	64	8.51050	65	1.48950	9.99977	40
30	8.47013	71	8.47032	71	1.52968	9.99981	30	30	8.51092	65	8.51115	65	1.48885	9.99977	30
40	8.47084	71	8.47103	71	1.52897	9.99981	20	40	8.51157	65	8.51180	65	1.48820	9.99977	20
50	8.47155	71	8.47174	71	1.52826	9.99981	10	50	8.51222	65	8.51245	65	1.48755	9.99977	10
12′ 0	8.47226	71	8.47245	71	1.52755	9.99981	0 18′	52′ 0	8.51287	64	8.51310	64	1.48690	9.99977	0 8′
10	8.47297	71	8.47316	71	1.52684	9.99981	50	10	8.51351	65	8.51374	65	1.48626	9.99977	50
20	8.47368	71	8.47387	71	1.52613	9.99981	40	20	8.51416	64	8.51439	64	1.48561	9.99977	40
30	8.47439	70	8.47458	70	1.52542	9.99981	30	30	8.51480	64	8.51503	65	1.48497	9.99977	30
40	8.47509	71	8.47528	71	1.52472	9.99981	20	40	8.51544	65	8.51568	64	1.48432	9.99977	20
50	8.47580	70	8.47599	70	1.52401	9.99981	10	50	8.51609	64	8.51632	64	1.48368	9.99977	10
13′ 0	8.47650	70	8.47669	71	1.52331	9.99981	0 17′	53′ 0	8.51673	64	8.51696	64	1.48304	9.99977	0 7′
10	8.47720	70	8.47740	70	1.52260	9.99980	50	10	8.51737	64	8.51760	64	1.48240	9.99976	50
20	8.47790	70	8.47810	70	1.52190	9.99980	40	20	8.51801	64	8.51824	64	1.48176	9.99976	40
30	8.47860	70	8.47880	70	1.52120	9.99980	30	30	8.51864	63	8.51888	64	1.48112	9.99976	30
40	8.47930	70	8.47950	70	1.52050	9.99980	20	40	8.51928	64	8.51952	63	1.48048	9.99976	20
50	8.48000	69	8.48020	69	1.51980	9.99980	10	50	8.51992	64	8.52015	64	1.47985	9.99976	10
14′ 0	8.48069	70	8.48089	70	1.51911	9.99980	0 16′	54′ 0	8.52055	64	8.52079	64	1.47921	9.99976	0 6′
10	8.48139	69	8.48159	69	1.51841	9.99980	50	10	8.52119	63	8.52143	63	1.47857	9.99976	50
20	8.48208	70	8.48228	70	1.51772	9.99980	40	20	8.52182	63	8.52206	63	1.47794	9.99976	40
30	8.48278	69	8.48298	69	1.51702	9.99980	30	30	8.52245	63	8.52269	63	1.47731	9.99976	30
40	8.48347	69	8.48367	69	1.51633	9.99980	20	40	8.52308	63	8.52332	64	1.47668	9.99976	20
50	8.48416	69	8.48436	69	1.51564	9.99980	10	50	8.52371	63	8.52396	63	1.47604	9.99976	10
15′ 0	8.48485	69	8.48505	69	1.51495	9.99980	0 15′	55′ 0	8.52434	63	8.52459	63	1.47541	9.99976	0 5′
10	8.48554	68	8.48574	69	1.51426	9.99980	50	10	8.52497	63	8.52522	62	1.47478	9.99976	50
20	8.48622	69	8.48643	68	1.51357	9.99980	40	20	8.52560	63	8.52584	63	1.47416	9.99976	40
30	8.48691	69	8.48711	69	1.51289	9.99980	30	30	8.52623	62	8.52647	63	1.47353	9.99975	30
40	8.48760	68	8.48780	69	1.51220	9.99979	20	40	8.52685	63	8.52710	62	1.47290	9.99975	20
50	8.48828	68	8.48849	68	1.51151	9.99979	10	50	8.52748	62	8.52772	63	1.47228	9.99975	10
16′ 0	8.48896	69	8.48917	68	1.51083	9.99979	0 14′	56′ 0	8.52810	62	8.52835	62	1.47165	9.99975	0 4′
10	8.48965	68	8.48985	68	1.51015	9.99979	50	10	8.52872	63	8.52897	63	1.47103	9.99975	50
20	8.49033	68	8.49053	68	1.50947	9.99979	40	20	8.52935	62	8.52960	62	1.47040	9.99975	40
30	8.49101	68	8.49121	68	1.50879	9.99979	30	30	8.52997	62	8.53022	62	1.46978	9.99975	30
40	8.49169	67	8.49189	68	1.50811	9.99979	20	40	8.53059	62	8.53084	62	1.46916	9.99975	20
50	8.49236	68	8.49257	68	1.50743	9.99979	10	50	8.53121	62	8.53146	62	1.46854	9.99975	10
17′ 0	8.49304	68	8.49325	68	1.50675	9.99979	0 13′	57′ 0	8.53183	62	8.53208	62	1.46792	9.99975	0 3′
10	8.49372	67	8.49393	67	1.50607	9.99979	50	10	8.53245	61	8.53270	62	1.46730	9.99975	50
20	8.49439	67	8.49460	68	1.50540	9.99979	40	20	8.53306	62	8.53332	61	1.46668	9.99975	40
30	8.49506	68	8.49528	67	1.50472	9.99979	30	30	8.53368	61	8.53393	62	1.46607	9.99975	30
40	8.49574	67	8.49595	67	1.50405	9.99979	20	40	8.53429	62	8.53455	61	1.46545	9.99975	20
50	8.49641	67	8.49662	67	1.50338	9.99979	10	50	8.53491	61	8.53516	62	1.46484	9.99974	10
18′ 0	8.49708	67	8.49729	67	1.50271	9.99979	0 12′	58′ 0	8.53552	62	8.53578	61	1.46422	9.99974	0 2′
10	8.49775	67	8.49796	67	1.50204	9.99978	50	10	8.53614	61	8.53639	61	1.46361	9.99974	50
20	8.49842	66	8.49863	67	1.50137	9.99978	40	20	8.53675	61	8.53700	62	1.46300	9.99974	40
30	8.49908	67	8.49930	67	1.50070	9.99978	30	30	8.53736	61	8.53762	61	1.46238	9.99974	30
40	8.49975	67	8.49997	66	1.50003	9.99978	20	40	8.53797	61	8.53823	61	1.46177	9.99974	20
50	8.50042	66	8.50063	67	1.49937	9.99978	10	50	8.53858	61	8.53884	61	1.46116	9.99974	10
19′ 0	8.50108	66	8.50130	66	1.49870	9.99978	0 11′	59′ 0	8.53919	60	8.53945	60	1.46055	9.99974	0 1′
10	8.50174	67	8.50196	67	1.49804	9.99978	50	10	8.53979	61	8.54005	61	1.45995	9.99974	50
20	8.50241	66	8.50263	66	1.49737	9.99978	40	20	8.54040	61	8.54066	61	1.45934	9.99974	40
30	8.50307	66	8.50329	66	1.49671	9.99978	30	30	8.54101	60	8.54127	60	1.45873	9.99974	30
40	8.50373	66	8.50395	66	1.49605	9.99978	20	40	8.54161	61	8.54187	61	1.45813	9.99974	20
50	8.50439	65	8.50461	66	1.49539	9.99978	10	50	8.54222	60	8.54249	60	1.45752	9.99974	10
50′ 0″	8.50504		8.50527		1.49473	9.99978	0″ 10′	60′ 0″	8.54282		8.54308		1.45692	9.99974	0″ 0′
	Cos	d.	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
0′ 0″	8.54282		8.54308		1.45692	9.99974	0″ 60′	10′ 0″	8.57757		8.57788		1.42212	9.99969	0″ 50′
10	8.54342	60	8.54369	61	1.45631	9.99973	50	10	8.57812	55	8.57843	55	1.42157	9.99969	50
20	8.54402	60	8.54429	60	1.45571	9.99973	40	20	8.57868	56	8 57899	56	1.42101	9.99969	40
30	8.54462	60	8.54489	60	1.45511	9.99973	30	30	8.57923	55	8.57955	56	1.42045	9.99969	30
40	8.54522	60	8.54549	60	1.45451	9.99973	20	40	8.57979	56	8.58010	55	1.41990	9.99969	20
50	8.54582	60	8.54609	60	1.45391	9.99973	10	50	8.58034	55	8.58065	55	1.41935	9.99969	10
1′ 0	8.54642	60	8.54669	60	1.45331	9.99973	0 59′	11′ 0	8.58089	55	8.58121	56	1.41879	9.99968	0 49′
10	8.54702	60	8.54729	60	1.45271	9.99973	50	10	8.58144	55	8.58176	55	1.41824	9.99968	50
20	8.54762	59	8.54789	59	1.45211	9.99973	40	20	8.58200	56	8.58231	55	1.41769	9.99968	40
30	8 54821	60	8.54848	60	1.45152	9.99973	30	30	8.58255	55	8.58286	55	1.41714	9.99968	30
40	8.54881	59	8.54908	59	1.45092	9.99973	20	40	8.58310	55	8.58341	55	1.41659	9.99968	20
50	8.54940	59	8.54967	60	1.45033	9.99973	10	50	8.58364	54	8.58396	55	1.41604	9.99968	10
2′ 0	8.54999	60	8.55027	59	1.44973	9.99973	0 58′	12′ 0	8.58419	55	8.58451	55	1.41549	9.99968	0 48′
10	8.55059	59	8.55086	59	1.44914	9.99973	50	10	8.58474	55	8.58506	55	1.41494	9.99968	50
20	8.55118	59	8.55145	60	1.44855	9.99972	40	20	8.58529	54	8.58561	55	1.41439	9.99968	40
30	8.55177	59	8.55205	59	1.44795	9.99972	30	30	8.58583	55	8.58616	54	1.41384	9.99968	30
40	8.55236	59	8.55264	59	1.44736	9.99972	20	40	8.58638	55	8.58670	55	1.41330	9.99968	20
50	8.55295	59	8.55323	59	1.44677	9.99972	10	50	8.58693	54	8.58725	54	1.41275	9.99968	10
3′ 0	8.55354	59	8.55382	59	1.44618	9.99972	0 57′	13′ 0	8.58747	54	8.58779	55	1.41221	9.99967	0 47′
10	8.55413	58	8.55441	58	1.44559	9.99972	50	10	8.58801	55	8.58834	54	1.41166	9.99967	50
20	8.55471	59	8.55499	59	1.44501	9.99972	40	20	8.58856	54	8.58888	55	1.41112	9.99967	40
30	8.55530	59	8.55558	59	1.44442	9.99972	30	30	8.58910	54	8.58943	54	1.41057	9.99967	30
40	8.55589	58	8.55617	58	1.44383	9.99972	20	40	8.58964	54	8.58997	54	1.41003	9.99967	20
50	8.55647	58	8.55675	59	1.44325	9.99972	10	50	8.59018	54	8.59051	54	1.40949	9.99967	10
4′ 0	8.55705	59	8.55734	58	1.44266	9.99972	0 56′	14′ 0	8.59072	54	8.59105	54	1.40895	9.99967	0 46′
10	8.55764	58	8.55792	58	1.44208	9.99972	50	10	8.59126	54	8.59159	54	1.40841	9.99967	50
20	8.55822	58	8.55850	59	1.44150	9.99972	40	20	8.59180	54	8.59213	54	1.40787	9.99967	40
30	8.55880	58	8.55909	58	1.44091	9.99972	30	30	8.59234	54	8.59267	54	1.40733	9.99967	30
40	8.55938	58	8.55967	58	1.44033	9.99971	20	40	8.59288	53	8.59321	54	1.40679	9.99967	20
50	8.55996	58	8.56025	58	1.43975	9.99971	10	50	8.59341	54	8.59375	53	1.40625	9.99967	10
5′ 0	8.56054	58	8.56083	58	1.43917	9.99971	0 55′	15′ 0	8.59395	53	8.59428	54	1.40572	9.99967	0 45′
10	8.56112	58	8.56141	58	1.43859	9.99971	50	10	8.59448	54	8.59482	54	1.40518	9.99966	50
20	8.56170	57	8.56199	57	1.43801	9.99971	40	20	8.59502	53	8.59536	53	1.40464	9.99966	40
30	8.56227	58	8.56256	58	1.43744	9.99971	30	30	8.59555	54	8.59589	53	1.40411	9.99966	30
40	8.56285	57	8.56314	58	1.43686	9.99971	20	40	8.59609	53	8.59642	53	1.40358	9.99966	20
50	8.56342	58	8.56372	57	1.43628	9.99971	10	50	8.59662	53	8.59696	54	1.40304	9.99966	10
6′ 0	8.56400	57	8.56429	58	1.43571	9.99971	0 54′	16′ 0	8.59715	53	8.59749	53	1.40251	9.99966	0 44′
10	8.56457	58	8.56487	57	1.43513	9.99971	50	10	8.59768	53	8.59802	54	1.40198	9.99966	50
20	8.56515	57	8.56544	57	1.43456	9.99971	40	20	8.59821	53	8.59856	53	1.40144	9.99966	40
30	8.56572	57	8.56601	58	1.43399	9.99971	30	30	8.59874	53	8.59909	53	1.40091	9.99966	30
40	8.56629	57	8.56659	57	1.43341	9.99971	20	40	8.59927	53	8.59962	53	1.40038	9.99966	20
50	8.56686	57	8.56716	57	1.43284	9.99970	10	50	8.59980	53	8.60015	53	1.39985	9.99966	10
7′ 0	8.56743	57	8.56773	57	1.43227	9.99970	0 53′	17′ 0	8.60033	53	8.60068	53	1.39932	9.99966	0 43′
10	8.56800	57	8.56830	57	1.43170	9.99970	50	10	8.60086	53	8.60121	52	1.39879	9.99965	50
20	8.56857	57	8.56887	57	1.43113	9.99970	40	20	8.60139	52	8.60173	53	1.39827	9.99965	40
30	8.56914	56	8.56944	56	1.43056	9.99970	30	30	8.60191	53	8.60226	53	1.39774	9.99965	30
40	8.56970	57	8.57000	57	1.43000	9.99970	20	40	8.60244	52	8.60279	52	1.39721	9.99965	20
50	8.57027	57	8.57057	57	1.42943	9.99970	10	50	8.60296	53	8.60331	53	1.39669	9.99965	10
8′ 0	8.57084	56	8.57114	56	1.42886	9.99970	0 52′	18′ 0	8.60349	52	8.60384	52	1.39616	9.99965	0 42′
10	8.57140	56	8.57170	57	1.42830	9.99970	50	10	8.60401	53	8.60436	53	1.39564	9.99965	50
20	8.57196	57	8.57227	56	1.42773	9.99970	40	20	8.60454	52	8.60489	52	1.39511	9.99965	40
30	8.57253	56	8.57283	57	1.42717	9.99970	30	30	8.60506	52	8.60541	52	1.39459	9.99965	30
40	8.57309	56	8.57340	56	1.42660	9.99970	20	40	8.60558	52	8.60593	53	1.39407	9.99965	20
50	8.57365	56	8.57396	56	1.42604	9.99969	10	50	8.60610	52	8.60646	52	1.39354	9.99965	10
9′ 0	8.57421	56	8.57452	56	1.42548	9.99969	0 51′	19′ 0	8.60662	52	8.60698	52	1.39302	9.99964	0 41′
10	8.57477	56	8.57508	56	1.42492	9 99969	50	10	8.60714	52	8.60750	52	1.39250	9.99964	50
20	8.57533	56	8.57564	56	1.42436	9.99969	40	20	8.60766	52	8.60802	52	1.39198	9.99964	40
30	8.57589	56	8.57620	56	1.42380	9.99969	30	30	8.60818	52	8.60854	52	1.39146	9.99964	30
40	8.57645	56	8.57676	56	1.42324	9.99969	20	40	8.60870	52	8.60906	52	1.39094	9.99964	20
50	8.57701	56	8.57732	56	1.42268	9.99969	10	50	8.60922	51	8.60958	51	1.39042	9.99964	10
10′ 0″	8.57757		8.57788		1.42212	9.99969	0″ 50′	20′ 0″	8.60973		8.61009		1.38991	9.99964	0″ 40′
	Cos	d.	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
20′0″	8.60973	52	8.61009	52	1.38991	9.99964	0″40′	30′0″	8.63968	48	8.64009	49	1.35991	9.99959	0″30′
10	8.61025	52	8.61061	52	1.38939	9.99964	50	10	8.64016	48	8.64058	48	1.35942	9.99959	50
20	8.61077	51	8.61113	51	1.38887	9.99964	40	20	8.64064	48	8.64106	48	1.35891	9.99958	40
30	8.61128	52	8.61164	52	1.38836	9.99964	30	30	8.64112	48	8.64154	48	1.35846	9.99958	30
40	8.61180	51	8.61216	51	1.38784	9.99964	20	40	8.64160	48	8.64202	48	1.35798	9.99958	20
50	8.61231	51	8.61267	52	1.38733	9.99964	10	50	8.64208	48	8.64250	48	1.35750	9.99958	10
21′0	8.61282	52	8.61319	51	1.38681	9.99963	039′	31′0	8.64256	48	8.64298	48	1.35702	9.99958	029′
10	8.61334	51	8.61370	52	1.38630	9.99963	50	10	8.64304	48	8.64346	48	1.35654	9.99958	50
20	8.61385	51	8.61422	51	1.38578	9.99963	40	20	8.64352	48	8.64394	48	1.35606	9.99958	40
30	8.61436	51	8.61473	51	1.38527	9.99963	30	30	8.64400	48	8.64442	48	1.35558	9.99958	30
40	8.61487	51	8.61524	51	1.38476	9.99963	20	40	8.64448	48	8.64490	48	1.35510	9.99958	20
50	8.61538	51	8.61575	51	1.38425	9.99963	10	50	8.64495	47	8.64538	48	1.35462	9.99958	10
22′0	8.61589	51	8.61626	51	1.38374	9.99963	038′	32′0	8.64543	47	8.64585	47	1.35415	9.99958	028′
10	8.61640	51	8.61677	51	1.38323	9.99963	50	10	8.64590	48	8.64633	48	1.35367	9.99957	50
20	8.61691	51	8.61728	51	1.38272	9.99963	40	20	8.64638	47	8.64681	47	1.35319	9.99957	40
30	8.61742	50	8.61779	51	1.38221	9.99963	30	30	8.64685	48	8.64728	48	1.35272	9.99957	30
40	8.61792	51	8.61830	51	1.38170	9.99963	20	40	8.64733	47	8.64776	47	1.35224	9.99957	20
50	8.61843	51	8.61881	50	1.38119	9.99963	10	50	8.64780	47	8.64823	47	1.35177	9.99957	10
23′0	8.61894	50	8.61931	51	1.38069	9.99962	037′	33′0	8.64827	48	8 64870	48	1.35130	9.99957	027′
10	8.61944	51	8.61982	51	1.38018	9.99962	50	10	8.64875	47	8.64918	47	1.35082	9.99957	50
20	8.61995	50	8.62033	50	1.37967	9.99962	40	20	8.64922	47	8.64965	47	1.35035	9.99957	40
30	8.62045	51	8.62083	51	1.37917	9.99962	30	30	8.64969	47	8.65012	48	1.34988	9.99957	30
40	8.62096	50	8.62134	50	1.37866	9.99962	20	40	8.65016	47	8.65060	47	1.34940	9.99957	20
50	8.62146	50	8.62184	50	1.37816	9.99962	10	50	8.65063	47	8.65107	47	1.34893	9.99957	10
24′0	8.62196	50	8.62234	51	1.37766	9.99962	036′	34′0	8.65110	47	8.65154	47	1.34846	9.99956	026′
10	8.62246	51	8.62285	50	1.37715	9.99962	50	10	8.65157	47	8.65201	47	1.34799	9.99956	50
20	8.62297	50	8.62335	50	1.37665	9.99962	40	20	8.65204	47	8.65248	47	1.34752	9.99956	40
30	8.62347	50	8.62385	50	1.37615	9.99962	30	30	8.65251	47	8.65295	47	1.34705	9.99956	30
40	8.62397	50	8.62435	50	1.37565	9 99962	20	40	8.65298	46	8.65342	46	1.34658	9.99956	20
50	8.62447	50	8.62485	50	1.37515	9.99961	10	50	8.65344	47	8.65388	47	1.34612	9.99956	10
25′0	8.62497	49	8.62535	50	1.37465	9.99961	035′	35′0	8.65391	47	8.65435	47	1.34565	9.99956	025′
10	8.62546	50	8.62585	50	1.37415	9.99961	50	10	8.65438	46	8.65482	47	1.34518	9.99956	50
20	8.62596	50	8.62635	50	1.37365	9.99961	40	20	8.65484	47	8.65529	46	1.34471	9.99956	40
30	8.62646	50	8.62685	50	1.37315	9.99961	30	30	8.65531	46	8.65575	47	1.34425	9.99956	30
40	8.62696	49	8.62735	49	1.37265	9.99961	20	40	8.65577	47	8.65622	46	1.34378	9.99955	20
50	8.62745	50	8.62784	50	1.37216	9.99961	10	50	8.65624	46	8.65668	47	1.34332	9.99955	10
26′0	8.62795	49	8.62834	50	1.37166	9.99961	034′	36′0	8.65670	47	8.65715	46	1.34285	9.99955	024′
10	8.62844	50	8.62884	49	1.37116	9.99961	50	10	8.65717	46	8.65761	47	1.34239	9.99955	50
20	8.62894	49	8.62933	50	1.37067	9.99961	40	20	8.65763	46	8.65808	46	1.34192	9.99955	40
30	8.62943	50	8.62983	49	1.37017	9.99961	30	30	8.65809	46	8.65854	46	1.34146	9.99955	30
40	8.62993	49	8.63032	49	1.36968	9.99960	20	40	8.65855	46	8.65900	47	1.34100	9.99955	20
50	8.63042	49	8.63081	50	1.36919	9.99960	10	50	8.65901	46	8.65947	46	1.34053	9.99955	10
27′0	8.63091	49	8.63131	49	1.36869	9.99960	033′	37′0	8.65947	47	8.65993	46	1.34007	9.99955	023′
10	8.63140	49	8.63180	49	1.36820	9.99960	50	10	8.65994	46	8.66039	46	1.33961	9.99955	50
20	8.63189	49	8.63229	49	1.36771	9.99960	40	20	8 66040	45	8.66085	46	1.33915	9.99955	40
30	8.63238	50	8.63278	50	1.36722	9.99960	30	30	8.66085	46	8.66131	46	1.33869	9.99954	30
40	8.63288	48	8.63328	49	1.36672	9.99960	20	40	8.66131	46	8.66177	46	1.33823	9.99954	20
50	8.63336	49	8.63377	49	1.36623	9.99960	10	50	8.66177	46	8.66223	46	1.33777	9.99954	10
28′0	8.63385	49	8.63426	49	1.36574	9.99960	032′	38′0	8.66223	46	8.66269	46	1.33731	9.99954	022′
10	8.63434	49	8.63475	48	1.36525	9.99960	50	10	8.66269	45	8.66315	46	1.33685	9.99954	50
20	8.63483	49	8.63523	49	1.36477	9.99960	40	20	8.66314	46	8.66361	45	1.33639	9.99954	40
30	8.63532	48	8.63572	49	1.36428	9 99959	30	30	8.66360	46	8.66406	46	1.33594	9 99954	30
40	8.63580	49	8.63621	49	1.36379	9.99959	20	40	8.66406	45	8.66452	46	1.33548	9.99954	20
50	8.63629	49	8.63670	48	1.36330	9 99959	10	50	8.66451	46	8.66498	45	1.33502	9.99954	10
29′0	8.63678	48	8.63718	49	1.36282	9.99959	031′	39′0	8.66497	45	8.66543	46	1.33457	9.99954	021′
10	8.63726	49	8.63767	49	1.36233	9.99959	50	10	8.66542	46	8.66589	45	1.33411	9.99953	50
20	8.63775	48	8.63816	48	1.36184	9.99959	40	20	8.66588	45	8.66634	46	1.33366	9.99953	40
30	8.63823	48	8.63864	49	1.36136	9.99959	30	30	8.66633	45	8.66680	45	1.33320	9.99953	30
40	8.63871	49	8.63913	48	1.36087	9.99959	20	40	8.66678	46	8.66725	46	1.33275	9.99953	20
50	8.63920	48	8.63961	48	1.36039	9.99959	10	50	8.66724	45	8.66771	45	1.33229	9.99953	10
30′0″	8.63968		8.64009		1.35991	9.99959	0″30′	40′0″	8.66769		8.66816		1.33184	9.99953	0″20′
	Cos	d.	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c	Cotg	Cos			Sin	d	Tang	d.c.	Cotg	Cos	
10′ 0″	8.66769		8.66816		1.33184	9.99953	0″20′	50′ 0″	8.69400		8.69453		1.30547	9.99947	0″ 10′
		45		45						42		43			
10	8.66814		8.66861		1.33139	9.99953	50	10	8.69442		8.69496		1.30504	9.99947	50
		45		45						43		42			
20	8.66859		8.66906		1.33094	9.99953	40	20	8.69485		8.69538		1.30462	9.99947	40
		45		46						42		43			
30	8.66901		8.66952		1.33048	9.99953	30	30	8.69527		8.69581		1.30419	9.99947	30
		45		45						43		42			
40	8.66949		8.66997		1.33003	9.99953	20	40	8.69570		8.69623		1.30377	9.99946	20
		45		45						42		43			
50	8.66994		8.67042		1.32958	9.99952	10	50	8.69612		8.69666		1.30334	9.99946	10
		45		45						42		42			
11′ 0	8.67039		8.67087		1.32913	9.99952	0 19′	51′ 0	8.69654		8.69708		1.30292	9.99946	0 9′
		45		45						43		42			
10	8.67084		8.67132		1.32868	9.99952	50	10	8.69697		8.69750		1.30250	9.99946	50
		45		45						42		43			
20	8.67129		8.67177		1.32823	9.99952	40	20	8.69739		8.69793		1.30207	9.99946	40
		45		45						42		42			
30	8.67174		8.67222		1.32778	9.99952	30	30	8.69781		8.69835		1.30165	9.99946	30
		45		45						42		42			
40	8.67219		8.67267		1.32733	9.99952	20	40	8.69823		8.69877		1.30123	9.99946	20
		44		45						42		43			
50	8.67263		8.67312		1.32688	9.99952	10	50	8.69865		8.69920		1.30080	9.99946	10
		45		44						42		42			
12′ 0	8.67308		8.67356		1.32644	9.99952	0 18′	52′ 0	8.69907		8.69962		1.30038	9.99946	0 8′
		45		45						42		42			
10	8.67353		8.67401		1.32599	9.99952	50	10	8.69949		8.70004		1.29996	9.99946	50
		44		45						42		42			
20	8.67397		8.67446		1.32554	9.99952	40	20	8.69991		8.70046		1.29954	9.99945	40
		45		44						42		42			
30	8.67442		8.67490		1.32510	9.99951	30	30	8.70033		8.70088		1.29912	9.99945	30
		44		45						42		42			
40	8.67486		8.67535		1.32465	9.99951	20	40	8.70075		8.70130		1.29870	9.99945	20
		45		44						42		42			
50	8.67531		8.67579		1.32421	9.99951	10	50	8.70117		8.70172		1.29828	9.99945	10
		44		45						42		42			
13′ 0	8.67575		8.67624		1.32376	9.99951	0 17′	53′ 0	8.70159		8.70214		1.29786	9.99945	0 7′
		44		44						42		42			
10	8.67619		8.67668		1.32332	9.99951	50	10	8.70201		8.70256		1.29744	9.99945	50
		45		45						41		42			
20	8.67664		8.67713		1.32287	9.99951	40	20	8.70242		8.70298		1.29702	9.99945	40
		44		44						42		41			
30	8.67708		8.67757		1.32243	9.99951	30	30	8.70284		8.70339		1.29661	9.99945	30
		44		44						42		42			
40	8.67752		8.67801		1.32199	9.99951	20	40	8.70326		8.70381		1.29619	9.99945	20
		44		45						41		42			
50	8.67796		8.67846		1.32154	9.99951	10	50	8.70367		8.70423		1.29577	9.99944	10
		45		44						42		42			
14′ 0	8.67841		8.67890		1.32110	9.99951	016′	54′ 0	8.70409		8.70465		1.29535	9.99944	0 6′
		44		44						42		41			
10	8.67885		8.67934		1.32066	9.99950	50	10	8.70451		8.70506		1.29494	9.99944	50
		44		44						41		42			
20	8.67929		8.67978		1.32022	9.99950	40	20	8.70492		8.70548		1.29452	9.99944	40
		44		44						42		41			
30	8.67973		8.68022		1.31978	9.99950	30	30	8.70534		8.70589		1.29411	9.99944	30
		44		44						41		42			
40	8.68017		8.68066		1.31934	9.99950	20	40	8.70575		8.70631		1.29369	9.99944	20
		43		44						41		42			
50	8.68060		8.68110		1.31890	9.99950	10	50	8.70616		8.70673		1.29327	9.99944	10
		44		44						42		41			
15′ 0	8.68104		8.68154		1.31846	9.99950	015′	55′ 0	8.70658		8.70714		1.29286	9.99944	0 5′
		44		44						41		41			
10	8.68148		8.68198		1.31802	9.99950	50	10	8.70699		8.70755		1.29245	9.99944	50
		44		44						41		42			
20	8.68192		8.68242		1.31758	9.99950	40	20	8.70740		8.70797		1.29203	9.99943	40
		44		44						41		41			
30	8.68236		8.68286		1.31714	9.99950	30	30	8.70781		8.70838		1.29162	9.99943	30
		43		44						42		41			
40	8.68279		8.68330		1.31670	9.99950	20	40	8.70823		8.70879		1.29121	9 99943	20
		44		43						41		42			
50	8.68323		8.68373		1.31627	9.99949	10	50	8.70864		8.70921		1.29079	9.99943	10
		44		44						41		41			
16′ 0	8.68367		8.68417		1.31583	9.99949	011′	56′ 0	8.70905		8.70962		1.29038	9.99943	0 4′
		43		44						41		41			
10	8.68410		8 68461		1.31539	9.99949	50	10	8.70946		8.71003		1.28997	9.99943	50
		44		43						41		41			
20	8.68454		8.68504		1 31496	9.99949	40	20	8.70987		8.71044		1.28956	9.99943	40
		43		44						41		41			
30	8.68497		8.68548		1.31452	9.99949	30	30	8.71028		8.71085		1.28915	9.99943	30
		43		44						41		41			
40	8.68540		8.68592		1.31408	9.99949	20	40	8.71069		8.71126		1.28874	9.99943	20
		44		43						41		41			
50	8.68584		8.68635		1.31365	9.99949	10	50	8.71110		8.71167		1.28833	9.99943	10
		43		43						41		41			
17′ 0	8.68627		8.68678		1.31322	9.99949	013′	57′ 0	8.71151		8.71208		1.28792	9.99942	0 3′
		43		44						41		41			
10	8.68670		8.68722		1.31278	9.99949	50	10	8.71192		8.71249		1.28751	9.99942	50
		44		43						40		41			
20	8.68714		8.68765		1.31235	9.99949	40	20	8.71232		8.71290		1.28710	9.99942	40
		43		43						41		41			
30	8.68757		8.68808		1.31192	9.99948	30	30	8.71273		8.71331		1.28669	9.99942	30
		43		44						41		41			
40	8.68800		8.68852		1.31148	9.99948	20	40	8.71314		8.71372		1.28628	9.99942	20
		43		43						41		41			
50	8.68843		8.68895		1.31105	9.99948	10	50	8.71355		8.71413		1-28587	9.99942	10
		43		43						40		40			
18′ 0	8.68886		8.68938		1.31062	9.99948	012′	58′ 0	8.71395		8.71453		1.28547	9.99942	0 2′
		43		43						41		41			
10	8.68929		8.68981		1.31019	9.99948	50	10	8.71436		8.71494		1.28506	9.99942	50
		43		43						40		41			
20	8 68972		8.69024		1.30976	9.99948	40	20	8 71476		8.71535		1.28465	9.99942	40
		43		43						41		40			
30	8 69015		8.69067		1.30933	9.99948	30	30	8.71517		8.71575		1.28425	9.99941	30
		43		43						40		41			
40	8.69058		8.69110		1.30890	9.99948	20	40	8.71557		8.71616		1 28384	9.99941	20
		43		43						41		41			
50	8.69101		8.69153		1.30847	9 99948	10	50	8.71598		8.71657		1.28343	9.99941	10
		43		43						40		40			
19′ 0	8.69144		8.69196		1.30804	9.99948	011′	59′ 0	8.71638		8.71697		1 28303	9.99941	0 1′
		43		43						41		41			
10	8.69187		8.69239		1.30761	9.99947	50	10	8.71679		8.71738		1.28262	9.99941	50
		42		43						40		40			
20	8.69229		8.69282		1.30718	9.99947	40	20	8.71719		8.71778		1.28222	9.99941	40
		43		43						40		41			
30	8.69272		8.69325		1.30675	9.99947	30	30	8.71759		8.71819		1.28181	9.99941	30
		43		43						41		40			
40	8.69315		8.69368		1.30632	9.99947	20	40	8.71800		8.71859		1.28141	9.99941	20
		42		42						40		40			
50	8.69357		8.69410		1.30590	9.99947	10	50	8.71840		8.71899		1.28101	9.99941	10
		43		43						40		41			
50′ 0″	8.69400		8.69453		1.30547	9.99947	0″ 10′	60′ 0″	8.71880		8.71940		1.28060	9.99940	0″ 0′
	Cos	d.	Cotg	d c.	Tang	Sin			Cos	d.	Cotg	d c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
0′ 0″	8.71880	40	8.71940	40	1.28060	9.99940	0″ 60′	10′ 0″	8.74226	38	8.74292	38	1.25708	9.99934	0″ 50′
10	8.71920	40	8.71980	40	1.28020	9.99940	50	10	8.74264	38	8.74330	39	1.25670	9.99934	50
20	8.71960	40	8.72020	40	1.27980	9.99940	40	20	8.74302	38	8.74369	38	1.25631	9.99933	40
30	8.72000	40	8.72060	40	1.27940	9.99940	30	30	8.74340	38	8.74407	38	1.25593	9.99933	30
40	8.72040	40	8.72100	41	1.27900	9.99940	20	40	8.74378	38	8.74445	38	1.25555	9.99933	20
50	8.72080	40	8.72141	40	1.27859	9.99940	10	50	8.74416	38	8.74483	39	1.25517	9.99933	10
1′ 0	8.72120	40	8.72181	40	1.27819	9.99940	059′	11′ 0	8.74454	37	8.74521	38	1.25479	9.99933	049′
10	8.72160	40	8.72221	40	1.27779	9.99940	50	10	8.74491	38	8.74559	38	1.25441	9.99933	50
20	8.72200	40	8.72261	40	1.27739	9.99940	40	20	8.74529	38	8.74597	37	1.25403	9.99933	40
30	8.72240	40	8.72301	40	1.27699	9.99939	30	30	8.74567	38	8.74634	38	1.25366	9.99933	30
40	8.72280	40	8.72341	39	1.27659	9.99939	20	40	8.74605	37	8.74672	38	1.25328	9.99932	20
50	8.72320	39	8.72380	40	1.27620	9.99939	10	50	8.74642	38	8.74710	38	1.25290	9.99932	10
2′ 0	8.72359	40	8.72420	40	1.27580	9.99939	058′	12′ 0	8.74680	38	8.74748	38	1.25252	9.99932	048′
10	8.72399	40	8.72460	40	1.27540	9.99939	50	10	8.74718	37	8.74786	37	1.25214	9.99932	50
20	8.72439	39	8.72500	40	1.27500	9.99939	40	20	8.74755	38	8.74823	38	1.25177	9.99932	40
30	8.72478	40	8.72540	39	1.27460	9.99939	30	30	8.74793	38	8.74861	38	1.25139	9.99932	30
40	8.72518	40	8.72579	40	1.27421	9.99939	20	40	8.74831	37	8.74899	37	1.25101	9.99932	20
50	8.72558	39	8.72619	40	1.27381	9.99939	10	50	8.74868	38	8.74936	38	1.25064	9.99932	10
3′ 0	8.72597	40	8.72659	39	1.27341	9.99938	057′	13′ 0	8.74906	37	8.74974	38	1.25026	9.99932	047′
10	8.72637	39	8.72698	40	1.27302	9.99938	50	10	8.74943	37	8.75012	37	1.24988	9.99931	50
20	8.72676	40	8.72738	39	1.27262	9.99938	40	20	8.74980	38	8.75049	38	1.24951	9.99931	40
30	8.72716	39	8.72777	40	1.27223	9.99938	30	30	8.75018	37	8.75087	37	1.24913	9.99931	30
40	8.72755	39	8.72817	39	1.27183	9.99938	20	40	8.75055	37	8.75124	38	1.24876	9.99931	20
50	8.72794	40	8.72856	40	1.27144	9.99938	10	50	8.75092	38	8.75162	37	1.24838	9.99931	10
4′ 0	8.72834	39	8.72896	39	1.27104	9.99938	056′	14′ 0	8.75130	37	8.75199	37	1.24801	9.99931	046′
10	8.72873	39	8.72935	40	1.27065	9.99938	50	10	8.75167	37	8.75236	38	1.24764	9.99931	50
20	8.72912	39	8.72975	39	1.27025	9.99938	40	20	8.75204	37	8.75274	37	1.24726	9.99931	40
30	8.72951	40	8.73014	39	1.26986	9.99937	30	30	8.75241	38	8.75311	37	1.24689	9.99930	30
40	8.72991	39	8.73053	40	1.26947	9.99937	20	40	8.75279	37	8.75348	37	1.24652	9.99930	20
50	8.73030	39	8.73093	39	1.26907	9.99937	10	50	8.75316	37	8.75385	38	1.24615	9.99930	10
5′ 0	8.73069	39	8.73132	39	1.26868	9.99937	055′	15′ 0	8.75353	37	8.75423	37	1.24577	9.99930	045′
10	8.73108	39	8.73171	39	1.26829	9.99937	50	10	8.75390	37	8.75460	37	1.24540	9.99930	50
20	8.73147	39	8.73210	39	1.26790	9.99937	40	20	8.75427	37	8.75497	37	1.24503	9.99930	40
30	8.73186	39	8.73249	39	1.26751	9.99937	30	30	8.75464	37	8.75534	37	1.24466	9.99930	30
40	8.73225	39	8.73288	39	1.26712	9.99937	20	40	8.75501	37	8.75571	37	1.24429	9.99930	20
50	8.73264	39	8.73327	39	1.26673	9.99937	10	50	8.75538	37	8.75608	37	1.24392	9.99929	10
6′ 0	8.73303	39	8.73366	39	1.26634	9.99936	054′	16′ 0	8.75575	37	8.75645	37	1.24355	9.99929	044′
10	8.73342	38	8.73405	39	1.26595	9.99936	50	10	8.75612	36	8.75682	37	1.24318	9.99929	50
20	8.73380	39	8.73444	39	1.26556	9.99936	40	20	8.75648	37	8.75719	37	1.24281	9.99929	40
30	8.73419	39	8.73483	39	1.26517	9.99936	30	30	8.75685	37	8.75756	37	1.24244	9.99929	30
40	8.73458	39	8.73522	39	1.26478	9.99936	20	40	8.75722	37	8.75793	37	1.24207	9.99929	20
50	8.73497	38	8.73561	39	1.26439	9.99936	10	50	8.75759	36	8.75830	37	1.24170	9.99929	10
7′ 0	8.73535	39	8.73600	38	1.26400	9.99936	053′	17′ 0	8.75795	37	8.75867	37	1.24133	9.99929	043′
10	8.73574	39	8.73638	39	1.26362	9.99936	50	10	8.75832	37	8.75904	36	1.24096	9.99928	50
20	8.73613	38	8.73677	39	1.26323	9.99935	40	20	8.75869	36	8.75940	37	1.24060	9.99928	40
30	8.73651	39	8.73716	38	1.26284	9.99935	30	30	8.75905	37	8.75977	37	1.24023	9.99928	30
40	8.73690	38	8.73754	39	1.26246	9.99935	20	40	8.75942	37	8.76014	37	1.23986	9.99928	20
50	8.73728	39	8.73793	39	1.26207	9.99935	10	50	8.75979	36	8.76051	36	1.23949	9.99928	10
8′ 0	8.73767	38	8.73832	38	1.26168	9.99935	052′	18′ 0	8.76015	37	8.76087	37	1.23913	9.99928	042′
10	8.73805	39	8.73870	38	1.26130	9.99935	50	10	8.76052	36	8.76124	36	1.23876	9.99928	50
20	8.73844	38	8.73909	39	1.26091	9.99935	40	20	8.76088	37	8.76160	37	1.23840	9.99928	40
30	8.73882	38	8.73947	38	1.26053	9.99935	30	30	8.76125	36	8.76197	36	1.23803	9.99928	30
40	8.73920	39	8.73986	39	1.26014	9.99935	20	40	8.76161	36	8.76233	37	1.23767	9.99927	20
50	8.73959	38	8.74024	39	1.25976	9.99934	10	50	8.76197	37	8.76270	36	1.23730	9.99927	10
9′ 0	8.73997	38	8.74063	38	1.25937	9.99934	051′	19′ 0	8.76234	36	8.76306	37	1.23694	9.99927	041′
10	8.74035	38	8.74101	38	1.25899	9.99934	50	10	8.76270	36	8.76343	36	1.23657	9.99927	50
20	8.74073	39	8.74139	39	1.25861	9.99934	40	20	8.76306	36	8.76379	37	1.23621	9.99927	40
30	8.74112	38	8.74178	38	1.25822	9.99934	30	30	8.76343	37	8.76416	36	1.23584	9.99927	30
40	8.74150	38	8.74216	38	1.25784	9.99934	20	40	8.76379	36	8.76452	36	1.23548	9.99927	20
50	8.74188	38	8.74254	38	1.25746	9.99934	10	50	8.76415	36	8.76488	37	1.23512	9.99927	10
10′ 0″	8.74226		8.74292		1.25708	9.99934	0″ 50′	20′ 0″	8.76451		8.76525		1.23475	9.99926	0″ 40′
	Cos	d.	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
20′0″	8.76451	36	8.76525	36	1.23475	9.99926	0″40′	30′0″	8.78568	34	8.78649	34	1.21351	9.99919	0″30′
10	8.76487	36	8.76561	36	1.23439	9.99926	50	10	8.78602	34	8.78683	35	1.21317	9.99919	50
20	8.76523	36	8.76597	36	1.23403	9.99926	40	20	8.78636	35	8.78718	34	1.21282	9.99919	40
30	8.76559	36	8.76633	36	1.23367	9.99926	30	30	8.78671	34	8.78752	35	1.21248	9.99919	30
40	8.76595	36	8.76669	37	1.23331	9.99926	20	40	8.78705	34	8.78787	34	1.21213	9.99918	20
50	8.76631	36	8.76706	36	1.23294	9.99926	10	50	8.78739	34	8.78821	34	1.21179	9.99918	10
21′0	8.76667	36	8.76742	36	1.23258	9.99926	039′	31′0	8.78774	34	8.78855	35	1.21145	9.99918	029′
10	8.76703	36	8.76778	36	1.23222	9.99926	50	10	8.78808	34	8.78890	34	1.21110	9.99918	50
20	8.76739	36	8.76814	36	1.23186	9.99925	40	20	8.78842	34	8.78924	34	1.21076	9.99918	40
30	8.76775	36	8.76850	36	1.23150	9.99925	30	30	8.78876	34	8.78958	35	1.21042	9.99918	30
40	8.76811	36	8.76886	36	1.23114	9.99925	20	40	8.78910	35	8.78993	34	1.21007	9.99918	20
50	8.76847	36	8.76922	36	1.23078	9.99925	10	50	8.78945	34	8.79027	34	1.20973	9.99917	10
22′0	8.76883	36	8.76958	36	1.23042	9.99925	038′	32′0	8.78979	34	8.79061	35	1.20939	9.99917	028′
10	8.76919	35	8.76994	36	1.23006	9.99925	50	10	8.79013	34	8.79096	34	1.20904	9.99917	50
20	8.76954	36	8.77030	35	1.22970	9.99925	40	20	8.79047	34	8.79130	34	1.20870	9.99917	40
30	8.76990	36	8.77065	36	1.22935	9.99925	30	30	8.79081	34	8.79164	34	1.20836	9.99917	30
40	8.77026	35	8.77101	36	1.22899	9.99924	20	40	8.79115	34	8.79198	34	1.20802	9.99917	20
50	8.77061	36	8.77137	36	1.22863	9.99924	10	50	8.79149	34	8.79232	34	1.20768	9.99917	10
23′0	8.77097	36	8.77173	35	1.22827	9.99924	037′	33′0	8.79183	34	8.79266	34	1.20734	9.99917	027′
10	8.77133	35	8.77208	36	1.22792	9.99924	50	10	8.79217	34	8.79300	34	1.20700	9.99916	50
20	8.77168	36	8.77244	36	1.22756	9.99924	40	20	8.79251	33	8.79334	34	1.20666	9.99916	40
30	8.77204	35	8.77280	36	1.22720	9.99924	30	30	8.79284	34	8.79368	34	1.20632	9.99916	30
40	8.77239	36	8.77315	35	1.22685	9.99924	20	40	8.79318	34	8.79402	34	1.20598	9.99916	20
50	8.77275	35	8.77351	36	1.22649	9.99924	10	50	8.79352	34	8.79436	34	1.20564	9.99916	10
24′0	8.77310	36	8.77387	35	1.22613	9.99923	036′	34′0	8.79386	34	8.79470	34	1.20530	9.99916	026′
10	8.77346	35	8.77422	36	1.22578	9.99923	50	10	8.79420	33	8.79504	34	1.20496	9.99916	50
20	8.77381	35	8.77458	35	1.22542	9.99923	40	20	8.79453	34	8.79538	34	1.20462	9.99916	40
30	8.77416	36	8.77493	35	1.22507	9.99923	30	30	8.79487	34	8.79572	34	1.20428	9.99915	30
40	8.77452	35	8.77529	36	1.22471	9.99923	20	40	8.79521	34	8.79606	33	1.20394	9.99915	20
50	8.77487	35	8.77564	35	1.22436	9.99923	10	50	8.79555	33	8.79639	34	1.20361	9.99915	10
25′0	8.77522	36	8.77600	36	1.22400	9.99923	035′	35′0	8.79588	34	8.79673	34	1.20327	9.99915	025′
10	8.77558	35	8.77635	35	1.22365	9.99923	50	10	8.79622	33	8.79707	34	1.20293	9.99915	50
20	8.77593	35	8.77670	36	1.22330	9.99922	40	20	8.79655	34	8.79741	33	1.20259	9.99915	40
30	8.77628	35	8.77706	35	1.22294	9.99922	30	30	8.79689	33	8.79774	34	1.20226	9.99915	30
40	8.77663	35	8.77741	35	1.22259	9.99922	20	40	8.79722	34	8.79808	34	1.20192	9.99914	20
50	8.77698	35	8.77776	35	1.22224	9.99922	10	50	8.79756	33	8.79842	33	1.20158	9.99914	10
26′0	8.77733	35	8.77811	36	1.22189	9.99922	034′	36′0	8.79789	34	8.79875	34	1.20125	9.99914	021′
10	8.77768	35	8.77847	35	1.22153	9.99922	50	10	8.79823	33	8.79909	33	1.20091	9.99914	50
20	8.77803	35	8.77882	35	1.22118	9.99922	40	20	8.79856	34	8.79942	34	1.20058	9.99914	40
30	8.77838	35	8.77917	35	1.22083	9.99922	30	30	8.79890	33	8.79976	33	1.20024	9.99914	30
40	8.77873	35	8.77952	35	1.22048	9.99921	20	40	8.79923	33	8.80009	34	1.19991	9.99914	20
50	8.77908	35	8.77987	35	1.22013	9.99921	10	50	8.79956	34	8.80043	33	1.19957	9.99914	10
27′0	8.77943	35	8.78022	35	1.21978	9.99921	033′	37′0	8.79990	33	8.80076	34	1.19924	9.99913	023′
10	8.77978	35	8.78057	35	1.21943	9.99921	50	10	8.80023	33	8.80110	33	1.19890	9.99913	50
20	8.78013	35	8.78092	35	1.21908	9.99921	40	20	8.80056	34	8.80143	34	1.19857	9.99913	40
30	8.78048	35	8.78127	35	1.21873	9.99921	30	30	8.80090	33	8.80177	33	1.19823	9.99913	30
40	8.78083	35	8.78162	35	1.21838	9.99921	20	40	8.80123	33	8.80210	33	1.19790	9.99913	20
50	8.78118	34	8.78197	35	1.21803	9.99921	10	50	8.80156	33	8.80243	34	1.19757	9.99913	10
28′0	8.78152	35	8.78232	35	1.21768	9.99920	032′	38′0	8.80189	33	8.80277	33	1.19723	9.99913	022′
10	8.78187	35	8.78267	35	1.21733	9.99920	50	10	8.80222	33	8.80310	33	1.19690	9.99912	50
20	8.78222	35	8.78302	35	1.21698	9.99920	40	20	8.80255	34	8.80343	33	1.19657	9.99912	40
30	8.78257	34	8.78337	34	1.21663	9.99920	30	30	8.80289	33	8.80376	33	1.19624	9.99912	30
40	8.78291	35	8.78371	35	1.21629	9.99920	20	40	8.80322	33	8.80409	34	1.19591	9.99912	20
50	8.78326	34	8.78406	35	1.21594	9.99920	10	50	8.80355	33	8.80443	33	1.19557	9.99912	10
29′0	8.78360	35	8.78441	34	1.21559	9.99920	031′	39′0	8.80388	33	8.80476	33	1.19524	9.99912	021′
10	8.78395	35	8.78475	35	1.21525	9.99920	50	10	8.80421	33	8.80509	33	1.19491	9.99912	50
20	8.78430	34	8.78510	35	1.21490	9.99919	40	20	8.80454	33	8.80542	33	1.19458	9.99912	40
30	8.78464	35	8.78545	34	1.21455	9.99919	30	30	8.80487	32	8.80575	33	1.19425	9.99911	30
40	8.78499	34	8.78579	35	1.21421	9.99919	20	40	8.80519	33	8.80608	33	1.19392	9.99911	20
50	8.78533	35	8.78614	35	1.21386	9.99919	10	50	8.80552	33	8.80641	33	1.19359	9.99911	10
30′0	8.78568		8.78649		1.21351	9.99919	0″30′	40′0	8.80585		8.80674		1.19326	9.99911	0″20′
	Cos	d	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
10′0″	8.80585		8.80674		1.19326	9 99911	0″ 20′	30′ 0″	8.82513		8 82610		1.17390	9.99903	0″ 10′
10	8.80618	33	8.80707	33	1.19293	9.99911	50	10	8.82544	31	8.82642	32	1.17358	9 99903	50
20	8.80651	33	8.80740	33	1.19260	9 99911	40	20	8.82576	32	8.82673	31	1.17327	9 99902	40
30	8 80684	33	8.80773	33	1.19227	9.99911	30	30	8.82607	31	8 82705	32	1.17295	9.99902	30
40	8.80716	32	8.80806	33	1.19194	9.99910	20	40	8.82639	32	8.82736	31	1.17264	9.99902	20
50	8.80749	33	8.80839	33	1.19161	9.99910	10	50	8·82670	31	8.82768	32	1.17232	9.99902	10.
		33		33						31		31			
11′0	8.80782		8.80872		1.19128	9.99910	019′	51′0	8.82701		8.82799		1.17201	9.99902	0 9′
10	8.80815	33	8 80905	33	1.19095	9.99910	50	10	8.82732	31	8.82831	32	1.17169	9.99902	50
20	8.80847	32	8.80937	32	1.19063	9.99910	40	20	8.82764	32	8.82862	31	1.17138	9.99902	40
30	8.80880	33	8.80970	33	1.19030	9.99910	30	30	8.82795	31	8.82893	31	1.17107	9.99901	30
40	8.80913	33	8.81003	33	1.18997	9 99910	20	40	8.82826	31	8 82925	32	1.17075	9.99901	20
50	8 80945	32	8.81036	33	1.18964	9 99910	10	50	8.82857	31	8.82956	31	1.17044	9.99901	10
		33		32						31		31			
12′0	8.80978		8.81068		1.18932	9.99909	018′	52′0	8.82888		8.82987		1.17013	9.99901	0 8′
10	8 81010	32	8.81101	33	1.18899	9.99909	50	10	8.82920	32	8.83019	32	1.16981	9.99901	50
20	8.81043	33	8.81134	33	1.18866	9.99909	40	20	8.82951	31	8.83050	31	1.16950	9.99901	40
30	8.81075	32	8.81166	32	1.18834	9.99909	30	30	8.82982	31	8.83081	31	1.16919	9.99901	30
40	8.81108	33	8.81199	33	1.18801	9 99909	20	40	8.83013	31	8.83112	31	1.16888	9.99900	20
50	8.81140	32	8.81232	33	1.18768	9.99909	10	50	8.83044	31	8.83144	32	1.16856	9.99900	10
		33		32						31		31			
13′0	8.81173		8.81264		1.18736	9.99909	017′	53′0	8.83075		8.83175		1.16825	9.99900	0 7′
10	8.81205	32	8.81297	33	1.18703	9.99908	50	10	8.83106	31	8.83206	31	1.16794	9.99900	50
20	8.81237	32	8.81329	32	1.18671	9.99908	40	20	8.83137	31	8.83237	31	1.16763	9.99900	40
30	8.81270	33	8.81362	33	1.18638	9.99908	30	30	8.83168	31	8.83268	31	1.16732	9.99900	30
40	8.81302	32	8.81394	32	1.18606	9.99998	20	40	8.83199	31	8.83299	31	1.16701	9.99900	20
50	8.81334	32	8.81427	33	1.18573	9.99908	10	50	8.83230	31	8.83330	31	1.16670	9.99899	10
		33		32						31		31			
14′0	8.81367		8.81459		1.18541	9.99908	016′	54′0	8.83261		8.83361		1.16639	9.99899	0 6′
10	8.81399	32	8.81491	32	1.18509	9.99908	50	10	8.83292	31	8.83392	31	1.16608	9.99899	50
20	8.81431	32	8.81524	33	1.18476	9.99907	40	20	8.83322	30	8.83423	31	1.16577	9.99899	40
30	8.81463	32	8.81556	32	1.18444	9.99907	30	30	8.83353	31	8.83454	31	1.16546	9.99899	30
40	8.81496	33	8.81588	32	1.18412	9.99907	20	40	8.83384	31	8.83485	31	1.16515	9.99899	20
50	8.81528	32	8.81621	33	1.18379	9.99907	10	50	8.83415	31	8.83516	31	1.16484	9.99899	10
		32		32						30					
15′0	8.81560		8.81653		1.18347	9.99907	015′	55′0	8.83446		8.83547	31	1.16453	9.99898	0 5′
10	8.81592	32	8 81685	32	1.18315	9.99907	50	10	8.83476	31	8.83578	31	1.16422	9.99898	50
20	8.81624	32	8.81717	32	1.18283	9.99907	40	20	8.83507	31	8.83609	31	1.16391	9.99898	40
30	8.81656	32	8.81750	33	1.18250	9.99907	30	30	8.83538	30	8.83640	31	1.16360	9.99898	30
40	8.81688	32	8.81782	32	1.18218	9.99906	20	40	8.83568	31	8.83671	30	1.16329	9.99898	20
50	8.81720	32	8.81814	32	1.18186	9.99906	10	50	8.83599	31	8.83701	31	1.16299	9.99898	10
		32		32						30					
16′0	8.81752		8.81846		1.18154	9.99906	014′	56′0	8.83630		8.83732	31	1.16268	9.99898	0 4′
10	8.81784	32	8.81878	32	1.18122	9.99906	50	10	8.83660	30	8.83763	31	1.16237	9.99897	50
20	8.81816	32	8.81910	32	1.18090	9.99906	40	20	8.83691	31	8.83794	30	1.16206	9.99897	40
30	8.81848	32	8.81942	32	1.18058	9.99906	30	30	8.83721	30	8.83824	31	1.16176	9.99897	30
40	8.81880	32	8.81974	32	1.18026	9.99906	20	40	8.83752	31	8.83855	31	1.16145	9.99897	20
50	8.81912	32	8.82006	32	1.17994	9.99905	10	50	8.83783	31	8.83886	30	1.16114	9.99897	10
		32		32						30					
17′0	8.81944		8.82038		1.17962	9.99905	013′	57′0	8.83813		8.83916	31	1.16084	9.99897	0 3′
10	8.81975	31	8.82070	32	1.17930	9.99905	50	10	8.83844	30	8.83947	31	1.16053	9.99897	50
20	8.82007	32	8.82102	32	1.17898	9.99905	40	20	8.83874	30	8.83978	30	1.16022	9.99896	40
30	8.82039	32	8.82134	32	1.17866	9.99905	30	30	8.83904	31	8.84008	31	1.15992	9.99896	30
40	8.82071	32	8.82166	32	1.17834	9.99905	20	40	8.83935	30	8.84039	30	1.15961	9.99896	20
50	8.82103	32	8.82198	32	1.17802	9.99905	10	50	8.83965	31	8.84069	31	1.15931	9.99896	10
		31								30					
18′0	8.82134		8.82230	32	1.17770	9 99904	012′	58′0	8.83996		8.84100	30	1.15900	9.99896	0 2′
10	8.82166	32	8.82262	31	1.17738	9.99904	50	10	8.84026	30	8.84130	31	1.15870	9.99896	50
20	8.82198	32	8.82293	32	1.17707	9.99904	40	20	8.84056	31	8.84161	30	1.15839	9.99896	10
30	8.82229	31	8.82325	32	1.17675	9 99904	30	30	8.84087	30	8 84191	31	1.15809	9.99895	30
40	8 82261	32	8.82357	32	1.17643	9.99904	20	40	8.84117	30	8.84222	30	1.15778	9.99895	20
50	8.82292	31	8.82389	31	1.17611	9 99904	10	50	8.84147	30	8.84252	30	1.15748	9.99895	10
		32								30					
19′0	8.82324		8.82420	32	1.17580	9.99904	011′	59′0	8.84177		8.84282	31	1.15718	9.99895	0 1′
10	8.82356	32	8.82452	32	1.17548	9.99903	50	10	8.84208	30	8.84313	30	1.15687	9.99895	50
20	8.82387	31	8.82484	31	1.17516	9.99903	40	20	8.84238	30	8.84343	31	1.15657	9.99895	10
30	8.82419	32	8.82515	32	1.17485	9.99903	30	30	8.84268	30	8.84374	30	1.15626	9.99895	30
40	8.82450	31	8.82547	32	1.17453	9.99903	20	40	8.84298	30	8.84404	30	1.15596	9.99894	20
50	8.82482	32	8.82579	31	1.17421	9.99903	10	50	8.84328	30	8.84434	30	1.15566	9.99894	10
		31								30					
20′0″	8.82513		8.82610		1.17390	9.99903	0″ 10′	60′0″	8.84358		8.84464		1.15536	9.99894	0″ 0′
	Cos	d.	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
0′ 0″	8.84358	31	8.84464	31	1.15536	9.99894	0″60′	10′0″	8.86128	29	8.86243	29	1.13757	9.99885	0″50′
10	8.84389	30	8.84495	30	1.15505	9.99894	50	10	8.86157	29	8.86272	29	1.13728	9.99885	50
20	8.84419	30	8.84525	30	1.15475	9.99894	40	20	8.86186	29	8.86301	29	1.13699	9.99885	40
30	8.84449	30	8.84555	30	1.15445	9.99894	30	30	8.86215	29	8.86330	29	1.13670	9.99885	30
40	8.84479	30	8.84585	30	1.15415	9.99893	20	40	8.86244	29	8.86359	29	1.13641	9.99884	20
50	8.84509	30	8.84615	31	1.15385	9.99893	10	50	8.86273	28	8.88388	29	1.13612	9.99884	10
1′ 0	8.84539	30	8.84646	30	1.15354	9.99893	059′	11′0	8.86301	29	8.86417	29	1.13583	9.99884	049′
10	8.84569	30	8.84676	30	1.15324	9.99893	50	10	8.86330	29	8.86446	29	1.13554	9.99884	50
20	8.84599	30	8.84706	30	1.15294	9.99893	40	20	8.86359	29	8.86475	29	1.13525	9.99884	40
30	8 84629	30	8.84736	30	1.15264	9.99893	30	30	8.86388	28	8.86504	29	1.13496	9.99884	30
40	8.84659	29	8.84766	30	1.15234	9.99893	20	40	8.86416	29	8.86533	29	1.13467	9.99884	20
50	8.84688	30	8.84796	30	1.15204	9.99892	10	50	8.86445	29	8.86562	29	1.13438	9.99883	10
2′ 0	8.84718	30	8.84826	30	1.15174	9.99892	058′	12′0	8.86474	28	8.86591	28	1.13409	9.99883	048′
10	8.84748	30	8.84856	30	1.15144	9.99892	50	10	8.86502	29	8.86619	29	1.13381	9.99883	50
20	8.84778	30	8.84886	30	1.15114	9.99892	40	20	8.86531	29	8.86648	29	1.13352	9.99883	40
30	8.84808	30	8.84916	30	1.15084	9.99892	30	30	8.86560	28	8.86677	29	1.13323	9.99883	30
40	8.84838	29	8.84946	30	1.15054	9.99892	20	40	8.86588	29	8.86706	28	1.13294	9.99883	20
50	8.84867	30	8.84976	30	1.15024	9.99892	10	50	8.86617	28	8.86734	29	1.13266	9.99882	10
3′ 0	8.84897	30	8.85006	30	1.14994	9.99891	057′	13′0	8.86645	29	8.86763	29	1.13237	9.99882	047′
10	8.84927	30	8.85036	29	1.14964	9.99891	50	10	8.86674	29	8.86792	29	1.13208	9.99882	50
20	8.84957	29	8.85065	30	1.14935	9.99891	40	20	8.86703	28	8.86821	28	1.13179	9.99882	40
30	8.84986	30	8.85095	30	1.14905	9.99891	30	30	8.86731	29	8.86849	29	1.13151	9.99882	30
40	8.85016	29	8.85125	30	1.14875	9.99891	20	40	8.86760	28	8.86878	29	1.13122	9.99882	20
50	8.85045	30	8.85155	30	1.14845	9.99891	10	50	8.86788	28	8.86907	28	1.13093	9.99882	10
4′ 0	8.85075	30	8.85185	29	1.14815	9.99891	056′	14′0	8.86816	29	8.86935	29	1.13065	9.99881	046′
10	8.85105	29	8.85214	30	1.14786	9.99890	50	10	8.86845	28	8.86964	28	1.13036	9.99881	50
20	8.85134	30	8.85244	30	1.14756	9.99890	40	20	8.86873	29	8.86992	29	1.13008	9.99881	40
30	8.85164	29	8.85274	30	1.14726	9.99890	30	30	8.86902	28	8.87021	28	1.12979	9.99881	30
40	8.85193	30	8.85304	29	1.14696	9.99890	20	40	8.86930	28	8.87049	29	1.12951	9.99881	20
50	8.85223	29	8.85333	30	1.14667	9.99890	10	50	8.86958	29	8.87078	28	1.12922	9.99881	10
5′ 0	8.85252	30	8.85363	29	1.14637	9.99890	055′	15′0	8.86987	28	8.87106	29	1.12894	9.99880	045′
10	8.85282	29	8.85392	30	1.14608	9.99889	50	10	8.87015	28	8.87135	28	1.12865	9.99880	50
20	8.85311	30	8.85422	30	1.14578	9.99889	40	20	8.87043	29	8.87163	29	1.12837	9.99880	40
30	8.85341	29	8.85452	29	1.14548	9.99889	30	30	8.87072	28	8.87192	28	1.12808	9.99880	30
40	8.85370	30	8.85481	30	1.14519	9.99889	20	40	8.87100	28	8.87220	29	1.12780	9.99880	20
50	8.85400	29	8.85511	29	1.14489	9.99889	10	50	8.87128	28	8.87249	28	1.12751	9.99880	10
6′ 0	8.85429	29	8.85540	30	1.14460	9.99889	054′	16′0	8.87156	29	8.87277	28	1.12723	9.99879	044′
10	8.85458	30	8.85570	29	1.14430	9.99889	50	10	8.87185	28	8.87305	29	1.12695	9.99879	50
20	8.85488	29	8.85599	30	1.14401	9.99888	40	20	8.87213	28	8.87334	28	1.12666	9.99879	40
30	8.85517	29	8.85629	29	1.14371	9.99888	30	30	8.87241	28	8.87362	28	1.12638	9.99879	30
40	8.85546	30	8.85658	30	1.14342	9.99888	20	40	8.87269	28	8.87390	29	1.12610	9.99879	20
50	8.85576	29	8.85688	29	1.14312	9.99888	10	50	8.87297	28	8.87419	28	1.12581	9.99879	10
7′ 0	8.85605	29	8.85717	30	1.14283	9.99888	053′	17′0	8.87325	29	8.87447	28	1.12553	9.99879	043′
10	8.85634	29	8.85747	29	1.14253	9.99888	50	10	8.87354	28	8.87475	28	1.12525	9.99878	50
20	8.85663	30	8.85776	29	1.14224	9.99888	40	20	8.87382	28	8.87503	29	1.12497	9.99878	40
30	8.85693	29	8.85805	30	1.14195	9.99887	30	30	8.87410	28	8.87532	28	1.12468	9.99878	30
40	8.85722	29	8.85835	29	1.14165	9.99887	20	40	8.87438	28	8.87560	28	1.12440	9.99878	20
50	8.85751	29	8.85864	29	1.14136	9.99887	10	50	8.87466	28	8.87588	28	1.12412	9.99878	10
8′ 0	8.85780	29	8.85893	29	1.14107	9.99887	052′	18′0	8.87494	28	8.87616	28	1.12384	9.99878	042′
10	8.85809	29	8.85922	30	1.14078	9.99887	50	10	8.87522	28	8.87644	29	1.12356	9.99877	50
20	8.85838	29	8.85952	29	1.14048	9.99887	40	20	8.87550	28	8.87673	28	1.12327	9.99877	40
30	8.85867	29	8.85981	29	1.14019	9.99886	30	30	8.87578	28	8.87701	28	1.12299	9.99877	30
40	8.85896	30	8.86010	29	1.13990	9.99886	20	40	8.87606	28	8.87729	28	1.12271	9.99877	20
50	8.85926	30	8.86039	29	1.13961	9.99886	10	50	8.87634	27	8.87757	28	1.12243	9.99877	10
9′ 0	8.85955	29	8.86069	29	1.13931	9.99886	051′	19′0	8.87661	28	8.87785	28	1.12215	9.99877	041′
10	8 85984	29	8.86098	29	1.13902	9.99886	50	10	8.87689	28	8.87813	28	1.12187	9.99876	50
20	8.86013	29	8.86127	29	1.13873	9.99886	40	20	8.87717	28	8.87841	28	1.12159	9.99876	40
30	8.86042	28	8.86156	29	1.13844	9.99886	30	30	8.87745	28	8.87869	28	1.12131	9.99876	30
40	8.86070	29	8.86185	29	1.13815	9.99885	20	40	8.87773	28	8.87897	28	1.12103	9.99876	20
50	8.86099	29	8.86214	29	1.13786	9.99885	10	50	8.87801	28	8.87925	28	1.12075	9.99876	10
10′0″	8.86128		8.86243		1.13757	9.99885	0″50′	20′0″	8.87829		8.87953		1.12047	9.99876	0″40′
	Cos	d.	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
20′0″	8.87829	27	8.87953	28	1.12047	9 99876	0″40	30′0″	8.89464	27	8 89598	27	1.10402	9.99866	0′30′
10	8.87856	28	8.87981	28	1.12019	9 99876	50	10	8.89491	27	8.89625	27	1.10375	9.99866	50
20	8.87884	28	8.88009	28	1.11991	9.99875	40	20	8 89518	27	8.89652	27	1.10348	9.99866	40
30	8.87912	28	8.88037	28	1.11963	9.99875	30	30	8.89545	26	8.89679	27	1.10321	9.99865	30
40	8.87940	27	8.88065	27	1.11935	9.99875	20	40	8.89571	27	8.89706	27	1.10294	9.99865	20
50	8.87967	28	8.88092	28	1.11908	9.99875	10	50	8.89598	27	8.89733	27	1.10267	9.99865	10
21′0	8.87995	28	8.88120	28	1.11880	9.99875	0 39′	31′0	8.89625	26	8.89760	26	1.10240	9.99865	029′
10	8.88023	27	8.88148	28	1.11852	9.99875	50	10	8.89651	27	8.89786	27	1.10214	9.99865	50
20	8.88050	28	8 88176	28	1.11824	9.99874	40	20	8.89678	26	8.89813	27	1.10187	9.99865	40
30	8 88078	28	8.88204	27	1.11796	9 99874	30	30	8.89704	27	8.89840	27	1.10160	9.99864	30
40	8.88106	27	8.88231	28	1.11769	9.99874	20	40	8.89731	27	8.89867	27	1.10133	9.99864	20
50	8.88133	28	8.88259	28	1.11741	9.99874	10	50	8.89758	26	8.89894	26	1.10106	9.99864	10
22′0	8.88161	27	8.88287	28	1.11713	9.99874	0 38′	32′0	8.89784	27	8.89920	27	1.10080	9.99864	028′
10	8.88188	28	8 88315	27	1.11685	9.99874	50	10	8.89811	27	8.89947	27	1.10053	9.99864	50
20	8.88216	27	8 88342	28	1.11658	9.99873	40	20	8.89837	26	8.89974	26	1.10026	9.99864	40
30	8.88243	28	8.88370	28	1.11630	9.99873	30	30	8.89864	27	8.90000	27	1.10000	9.99863	30
40	8.88271	28	8.88398	27	1.11602	9.99873	20	40	8.89890	26	8.90027	27	1.09973	9.99863	20
50	8.88298	27	8.88425	28	1.11575	9.99873	10	50	8.89917	27	8.90054	26	1.09946	9.99863	10
23′0	8.88326	28	8.88453	28	1.11547	9.99873	0 37′	33′0	8.89943	26	8.90080	27	1.09920	9.99863	027′
10	8.88353	27	8.88481	27	1.11519	9.99873	50	10	8.89970	27	8.90107	27	1.09893	9.99863	50
20	8.88381	28	8.88508	28	1.11492	9.99872	40	20	8.89996	26	8.90134	26	1.09866	9.99863	40
30	8.88408	27	8.88536	27	1.11464	9.99872	30	30	8.90023	27	8.90160	27	1.09840	9.99862	30
40	8.88436	28	8.88563	28	1.11437	9.99872	20	40	8.90049	26	8.90187	26	1.09813	9.99862	20
50	8.88463	27	8.88591	27	1.11409	9.99872	10	50	8.90075	26	8.90213	27	1.09787	9.99862	10
24′0	8.88490	28	8.88618	28	1.11382	9.99872	0 36′	34′0	8.90102	26	8.90240	26	1.09760	9.99862	026′
10	8 88518	27	8.88646	28	1.11354	9 99872	50	10	8.90128	26	8.90266	27	1.09734	9.99862	50
20	8.88545	27	8.88674	27	1.11326	9.99871	40	20	8.90154	27	8.90293	26	1.09707	9.99862	40
30	8.88572	28	8.88701	27	1.11299	9.99871	30	30	8.90181	26	8.90319	27	1.09681	9.99861	30
40	8.88600	27	8.88728	28	1.11272	9.99871	20	40	8.90207	26	8.90346	26	1.09654	9.99861	20
50	8.88627	27	8.88756	27	1.11244	9.99871	10	50	8.90233	27	8.90372	27	1.09628	9.99861	10
25′0	8.88654	27	8.88783	28	1.11217	9.99871	0 35′	35′0	8.90260	26	8.90399	26	1.09601	9.99861	025′
10	8.88681	28	8.88811	27	1.11189	9.99871	50	10	8.90286	26	8.90425	26	1.09575	9.99861	50
20	8.88709	27	8.88838	28	1.11162	9.99871	40	20	8.90312	26	8.90451	27	1.09549	9.99861	40
30	8.88736	27	8.88866	27	1.11134	9.99870	30	30	8.90338	26	8.90478	26	1.09522	9.99860	30
40	8.88763	27	8.88893	27	1.11107	9.99870	20	40	8.90364	26	8.90504	27	1.09496	9.99860	20
50	8.88790	27	8.88920	28	1.11080	9.99870	10	50	8.90391	27	8.90531	26	1.09469	9.99860	10
26′0	8.88817	28	8.88948	27	1.11052	9.99870	031′	36′0	8.90417	26	8.90557	26	1.09443	9.99860	024′
10	8.88845	27	8.88975	27	1.11025	9.99870	50	10	8.90443	26	8.90583	27	1.09417	9.99860	50
20	8.88872	27	8.89002	27	1.10998	9.99870	40	20	8 90469	26	8.90610	26	1.09390	9.99860	40
30	8.88899	27	8.89029	28	1.10971	9.99869	30	30	8.90495	26	8.90636	26	1.09364	9.99859	30
40	8.88926	27	8.89057	27	1.10943	9.99869	20	40	8.90521	27	8.90662	26	1.09338	9.99859	20
50	8.88953	27	8.89084	27	1.10916	9.99869	10	50	8.90548	26	8.90688	27	1.09312	9.99859	10
27′0	8.88980	27	8.89111	27	1.10889	9 99869	033′	37′0	8.90574	26	8.90715	26	1.09285	9.99859	023′
10	8.89007	27	8.89138	27	1.10862	9.99869	50	10	8.90600	26	8.90741	26	1.09259	9.99859	50
20	8.89034	27	8.89166	28	1.10834	9.99869	40	20	8.90626	26	8.90767	26	1.09233	9.99859	40
30	8.89061	27	8.89193	27	1.10807	9.99868	30	30	8.90652	26	8.90793	27	1.09207	9.99858	30
40	8.89088	27	8.89220	27	1.10780	9.99868	20	40	8.90678	26	8.90820	26	1.09180	9.99858	20
50	8.89115	27	8.89247	27	1.10753	9.99868	10	50	8.90704	26	8.90846	26	1.09154	9.99858	10
28′0	8.89142	27	8.89274	27	1.10726	9.99868	0 32′	38′0	8.90730	26	8.90872	26	1.09128	9.99858	022′
10	8.89169	27	8.89301	27	1.10699	9.99868	50	10	8.90756	26	8.90898	26	1.09102	9.99858	50
20	8.89196	27	8.89328	27	1.10672	9.99868	40	20	8.90782	26	8.90924	26	1.09076	9.99858	40
30	8.89223	27	8.89355	27	1.10645	9.99867	30	30	8.90808	26	8.90950	26	1.09050	9.99857	30
40	8.89250	27	8.89383	28	1.10617	9.99867	20	40	8.90834	26	8.90976	26	1.09024	9.99857	20
50	8.89277	27	8.89410	27	1.10590	9.99867	10	50	8.90859	25	8.91002	27	1.08998	9.99857	10
29′0	8.89304	26	8.89437	27	1.10563	9.99867	0 31′	39′0	8.90885	26	8.91029	26	1.08971	9.99857	021′
10	8.89330	27	8.89464	27	1.10536	9.99867	50	10	8.90911	26	8.91055	26	1.08945	9 99857	50
20	8.89357	27	8.89491	27	1.10509	9.99867	40	20	8.90937	26	8.91081	26	1.08919	9 99856	40
30	8.89384	27	8.89518	27	1.10482	9.99866	30	30	8.90963	26	8.91107	26	1.08893	9.99856	30
40	8.89411	27	8.89545	26	1.10455	9.99866	20	40	8.90989	26	8.91133	26	1.08867	9.99856	20
50	8.89438	26	8.89571	27	1.10429	9.99866	10	50	8.91015	26	8.91159	26	1.08841	9.99856	10
30′0″	8.89464		8.89598		1.10402	9.99866	0″ 30′	40′0′	8.91040	25	8.91185		1.08815	9.99856	0″20′
	Cos	d.	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
10′ 0″	8.91040	26	8.91185	26	1.08815	9.99856	0″ 20′	50′ 0″	8.92561	25	8.92716	25	1.07284	9.99845	0″ 10′
10	8.91066	26	8.91211	25	1.08789	9.99856	50	10	8.92586	25	8.92741	25	1.07259	9.99845	50
20	8.91092	26	8.91236	26	1.08764	9.99855	40	20	8.92611	25	8.92766	25	1.07234	9.99845	40
30	8.91118	25	8.91262	26	1.08738	9.99855	30	30	8.92636	24	8.92791	25	1.07209	9.99845	30
40	8.91143	26	8.91288	26	1.08712	9.99855	20	40	8.92660	25	8.92816	25	1.07184	9.99845	20
50	8.91169	26	8.91314	26	1.08686	9.99855	10	50	8.92685	25	8.92841	25	1.07159	9.99844	10
11′ 0	8.91195	26	8.91340	26	1.08660	9.99855	019′	51′ 0	8.92710	25	8.92866	25	1.07134	9.99844	0 9′
10	8.91221	25	8.91366	26	1.08634	9.99855	50	10	8.92735	25	8.92891	25	1.07109	9.99844	50
20	8.91246	26	8.91392	26	1.08608	9.99854	40	20	8.92760	24	8.92916	25	1.07084	9.99844	40
30	8.91272	26	8.91418	25	1.08582	9.99854	30	30	8.92784	25	8.92941	25	1.07059	9.99844	30
40	8.91298	25	8.91443	26	1.08557	9.99854	20	40	8.92809	25	8.92966	25	1.07034	9.99844	20
50	8.91323	26	8.91469	26	1.08531	9.99854	10	50	8.92834	25	8.92991	25	1.07009	9.99843	10
12′ 0	8.91349	25	8.91495	26	1.08505	9.99854	018′	52′ 0	8.92859	24	8.93016	24	1.06984	9.99843	0 8′
10	8.91374	26	8.91521	26	1.08479	9.99854	50	10	8.92883	25	8.93040	25	1.06960	9.99843	50
20	8.91400	26	8.91547	25	1.08453	9.99853	40	20	8.92908	25	8.93065	25	1.06935	9.99843	40
30	8.91426	25	8.91572	26	1.08428	9.99853	30	30	8.92933	25	8.93090	25	1.06910	9.99843	30
40	8.91451	26	8.91598	26	1.08402	9.99853	20	40	8.92957	24	8.93115	25	1.06885	9.99842	20
50	8.91477	25	8.91624	26	1.08376	9.99853	10	50	8.92982	25	8.93140	25	1.06860	9.99842	10
13′ 0	8.91502	26	8.91650	25	1.08350	9.99853	017′	53′ 0	8.93007	24	8.93165	25	1.06835	9.99842	0 7′
10	8.91528	25	8.91675	26	1.08325	9.99853	50	10	8.93031	25	8.93190	24	1.06810	9.99842	50
20	8.91553	26	8.91701	26	1.08299	9.99852	40	20	8.93056	25	8.93214	25	1.06786	9.99842	40
30	8.91579	25	8.91727	25	1.08273	9.99852	30	30	8.93081	25	8.93239	25	1.06761	9.99842	30
40	8.91604	26	8.91752	26	1.08248	9.99852	20	40	8.93105	24	8.93264	25	1.06736	9.99841	20
50	8.91630	25	8.91778	25	1.08222	9.99852	10	50	8.93130	25	8.93289	25	1.06711	9.99841	10
14′ 0	8.91655	25	8.91803	26	1.08197	9.99852	016′	54′ 0	8.93154	25	8.93313	24	1.06687	9.99841	0 6′
10	8.91680	26	8.91829	26	1.08171	9.99851	50	10	8.93179	25	8.93338	25	1.06662	9.99841	50
20	8.91706	25	8.91855	25	1.08145	9.99851	40	20	8.93203	24	8.93363	25	1.06637	9.99841	40
30	8.91731	26	8.91880	26	1.08120	9.99851	30	30	8.93228	25	8.93388	25	1.06612	9.99840	30
40	8.91757	25	8.91906	25	1.08094	9.99851	20	40	8.93253	25	8.93412	24	1.06588	9.99840	20
50	8.91782	25	8.91931	26	1.08069	9.99851	10	50	8.93277	24	8.93437	25	1.06563	9.99840	10
15′ 0	8.91807	26	8.91957	25	1.08043	9.99851	015′	55′ 0	8.93301	25	8.93462	24	1.06538	9.99840	0 5′
10	8.91833	25	8.91982	26	1.08018	9.99850	50	10	8.93326	24	8.93486	25	1.06514	9.99840	50
20	8.91858	25	8.92008	25	1.07992	9.99850	40	20	8.93350	25	8.93511	25	1.06489	9.99840	40
30	8.91883	26	8.92033	26	1.07967	9.99850	30	30	8.93375	24	8.93536	25	1.06464	9.99839	30
40	8.91909	25	8.92059	25	1.07941	9.99850	20	40	8.93399	25	8.93560	24	1.06440	9.99839	20
50	8.91934	25	8.92084	26	1.07916	9.99850	10	50	8.93424	24	8.93585	25	1.06415	9.99839	10
16′ 0	8.91959	25	8.92110	25	1.07890	9.99850	014′	56′ 0	8.93448	24	8.93609	24	1.06391	9.99839	0 4′
10	8.91984	26	8.92135	25	1.07865	9.99849	50	10	8.93472	25	8.93634	25	1.06366	9.99839	50
20	8.92010	25	8.92160	26	1.07840	9.99849	40	20	8.93497	24	8.93658	24	1.06342	9.99838	40
30	8.92035	25	8.92186	25	1.07814	9.99849	30	30	8.93521	25	8.93683	25	1.06317	9.99838	30
40	8.92060	25	8.92211	26	1.07789	9.99849	20	40	8.93546	24	8.93707	24	1.06293	9.99838	20
50	8.92085	25	8.92237	25	1.07763	9.99849	10	50	8.93570	24	8.93732	25	1.06268	9.99838	10
17′ 0	8.92110	25	8.92262	25	1.07738	9.99848	013′	57′ 0	8.93594	25	8.93756	24	1.06244	9.99838	0 3′
10	8.92135	26	8.92287	26	1.07713	9.99848	50	10	8.93619	24	8.93781	25	1.06219	9.99838	50
20	8.92161	25	8.92313	25	1.07687	9.99848	40	20	8.93643	24	8.93805	24	1.06195	9.99837	40
30	8.92186	25	8.92338	25	1.07662	9.99848	30	30	8.93667	24	8.93830	25	1.06170	9.99837	30
40	8.92211	25	8.92363	25	1.07637	9.99848	20	40	8.93691	25	8.93854	24	1.06146	9.99837	20
50	8.92236	25	8.92388	26	1.07612	9.99848	10	50	8.93716	24	8.93879	25	1.06121	9.99837	10
18′ 0	8.92261	25	8.92414	25	1.07586	9.99847	012′	58′ 0	8.93740	24	8.93903	24	1.06097	9.99837	0 2′
10	8.92286	25	8.92439	25	1.07561	9.99847	50	10	8.93764	24	8.93928	24	1.06072	9.99836	50
20	8.92311	25	8.92464	25	1.07536	9.99847	40	20	8.93788	24	8.93952	24	1.06048	9.99836	40
30	8.92336	25	8.92489	26	1.07511	9.99847	30	30	8.93812	24	8.93976	24	1.06024	9.99836	30
40	8.92361	25	8.92515	25	1.07485	9.99847	20	40	8.93837	25	8.94001	24	1.05999	9.99836	20
50	8.92386	25	8.92540	25	1.07460	9.99847	10	50	8.93861	24	8.94025	24	1.05975	9.99836	10
19′ 0	8.92411	25	8.92565	25	1.07435	9.99846	011′	59′ 0	8.93885	24	8.94049	25	1.05951	9.99836	0 1′
10	8.92436	25	8.92590	25	1.07410	9.99846	50	10	8.93909	24	8.94074	24	1.05926	9.99835	50
20	8.92461	25	8.92615	25	1.07385	9.99846	40	20	8.93933	24	8.94098	24	1.05902	9.99835	40
30	8.92486	25	8.92640	25	1.07360	9.99846	30	30	8.93957	24	8.94122	24	1.05878	9.99835	30
40	8.92511	25	8.92665	26	1.07335	9.99846	20	40	8.93981	24	8.94147	25	1.05853	9.99835	20
50	8.92536	25	8.92691	25	1.07309	9.99845	10	50	8.94006	24	8.94171	24	1.05829	9.99835	10
50′ 0″	8.92561		8.92716		1.07284	9.99845	0″ 10′	60′ 0″	8.94030		8.94195	24	1.05805	9.99834	0″ 0′
	Cos	d.	Cotg	d.c.	Tang	Cos			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
0′ 0″	8.94030	24	8.94195	24	1.05805	9.99834	0″ 60′	10′ 0″	8.95450	23	8.95627	23	1.04373	9.99823	0″ 50′
10	8.94054	24	8.94219	25	1.05781	9.99834	50	10	8.95473	23	8.95650	24	1.04350	9.99823	50
20	8.94078	24	8.94244	24	1.05756	9.99834	40	20	8.95496	24	8.95674	23	1.04326	9.99823	40
30	8.94102	24	8.94268	24	1.05732	9.99834	30	30	8.95520	23	8.95697	24	1.04303	9.99823	30
40	8.94126	24	8.94292	24	1.05708	9.99834	20	40	8.95543	23	8.95721	23	1.04279	9.99822	20
50	8.94150	24	8.94316	24	1.05684	9.99834	10	50	8.95566	23	8.95744	23	1.04256	9.99822	10
1′ 0	8.94174	24	8.94340	25	1.05660	9.99833	0 59′	11′ 0	8.95589	24	8.95767	24	1.04233	9.99822	0 49′
10	8.94198	24	8.94365	24	1.05635	9.99833	50	10	8.95613	23	8.95791	23	1.04209	9.99822	50
20	8.94222	24	8.94389	24	1.05611	9.99833	40	20	8.95636	23	8.95814	24	1.04186	9.99822	40
30	8.94246	24	8.94413	24	1.05587	9.99833	30	30	8.95659	23	8.95838	23	1.04162	9.99821	30
40	8.94270	24	8.94437	24	1.05563	9.99833	20	40	8.95682	23	8.95861	23	1.04139	9.99821	20
50	8.94294	23	8.94461	24	1.05539	9.99832	10	50	8.95705	23	8.95884	24	1.04116	9.99821	10
2′ 0	8.94317	24	8.94485	24	1.05515	9.99832	0 58′	12′ 0	8.95728	24	8.95908	23	1.04092	9.99821	0 48′
10	8.94341	24	8.94509	24	1.05491	9.99832	50	10	8.95752	23	8.95931	23	1.04069	9.99821	50
20	8.94365	24	8.94533	24	1.05467	9.99832	40	20	8.95775	23	8.95954	23	1.04046	9.99821	40
30	8.94389	24	8.94557	24	1.05443	9.99832	30	30	8.95798	23	8.95977	24	1.04023	9.99820	30
40	8.94413	24	8.94581	23	1.05419	9.99831	20	40	8.95821	23	8.96001	23	1.03999	9.99820	20
50	8.94437	24	8.94605	24	1.05394	9.99831	10	50	8.95844	23	8.96024	23	1.03976	9.99820	10
3′ 0	8.94461	23	8.94630	24	1.05370	9.99831	0 57′	13′ 0	8.95867	23	8.96047	24	1.03953	9.99820	0 47′
10	8.94484	24	8.94654	24	1.05346	9.99831	50	10	8.95890	23	8.96071	23	1.03929	9.99820	50
20	8.94508	24	8.94678	24	1.05322	9.99831	40	20	8.95913	23	8.96094	23	1.03906	9.99819	40
30	8.94532	24	8.94702	23	1.05298	9.99831	30	30	8.95936	23	8.96117	23	1.03883	9.99819	30
40	8.94556	24	8.94725	24	1.05275	9.99830	20	40	8.95959	23	8.96140	23	1.03860	9.99819	20
50	8.94580	23	8.94749	24	1.05251	9.99830	10	50	8.95982	23	8.96163	24	1.03837	9.99819	10
4′ 0	8.94603	24	8.94773	24	1.05227	9.99830	0 56′	14′ 0	8.96005	23	8.96187	23	1.03813	9.99819	0 46′
10	8.94627	24	8.94797	24	1.05203	9.99830	50	10	8.96028	23	8.96210	23	1.03790	9.99818	50
20	8.94651	24	8.94821	24	1.05179	9.99830	40	20	8.96051	23	8.96233	23	1.03767	9.99818	40
30	8.94675	23	8.94845	24	1.05155	9.99829	30	30	8.96074	23	8.96256	23	1.03744	9.99818	30
40	8.94698	24	8.94869	24	1.05131	9.99829	20	40	8.96097	23	8.96279	23	1.03721	9.99818	20
50	8.94722	24	8.94893	24	1.05107	9.99829	10	50	8.96120	23	8.96302	23	1.03698	9.99818	10
5′ 0	8.94746	23	8.94917	24	1.05083	9.99829	0 55′	15′ 0	8.96143	23	8.96325	24	1.03675	9.99817	0 45′
10	8.94769	24	8.94941	23	1.05059	9.99829	50	10	8.96166	23	8.96349	23	1.03651	9.99817	50
20	8.94793	24	8.94964	24	1.05036	9.99828	40	20	8.96189	23	8.96372	23	1.03628	9.99817	40
30	8.94817	23	8.94988	24	1.05012	9.99828	30	30	8.96212	22	8.96395	23	1.03605	9.99817	30
40	8.94840	24	8.95012	24	1.04988	9.99828	20	40	8.96234	23	8.96418	23	1.03582	9.99817	20
50	8.94864	23	8.95036	24	1.04964	9.99828	10	50	8.96257	23	8.96441	23	1.03559	9.99816	10
6′ 0	8.94887	24	8.95060	23	1.04940	9.99828	0 54′	16′ 0	8.96280	23	8.96464	23	1.03536	9.99816	0 44′
10	8.94911	24	8.95083	24	1.04917	9.99828	50	10	8.96303	23	8.96487	23	1.03513	9.99816	50
20	8.94935	23	8.95107	24	1.04893	9.99827	40	20	8.96326	23	8.96510	23	1.03490	9.99816	40
30	8.94958	24	8.95131	24	1.04869	9.99827	30	30	8.96349	22	8.96533	23	1.03467	9.99816	30
40	8.94982	23	8.95155	23	1.04845	9.99827	20	40	8.96371	23	8.96556	23	1.03444	9.99815	20
50	8.95005	24	8.95178	24	1.04822	9.99827	10	50	8.96394	23	8.96579	23	1.03421	9.99815	10
7′ 0	8.95029	23	8.95202	24	1.04798	9.99827	0 53′	17′ 0	8.96417	23	8.96602	23	1.03398	9.99815	0 43′
10	8.95052	24	8.95226	23	1.04774	9.99826	50	10	8.96440	22	8.96625	23	1.03375	9.99815	50
20	8.95076	23	8.95249	24	1.04751	9.99826	40	20	8.96462	23	8.96648	23	1.03352	9.99815	40
30	8.95099	24	8.95273	24	1.04727	9.99826	30	30	8.96485	23	8.96671	23	1.03329	9.99815	30
40	8.95123	23	8.95297	23	1.04703	9.99826	20	40	8.96508	23	8.96694	23	1.03306	9.99814	20
50	8.95146	24	8.95320	24	1.04680	9.99826	10	50	8.96531	22	8.96717	22	1.03283	9.99814	10
8′ 0	8.95170	23	8.95344	24	1.04656	9.99825	0 52′	18′ 0	8.96553	23	8.96739	23	1.03261	9.99814	0 42′
10	8.95193	23	8.95368	23	1.04632	9.99825	50	10	8.96576	23	8.96762	23	1.03238	9.99814	50
20	8.95216	24	8.95391	24	1.04609	9.99825	40	20	8.96599	22	8.96785	23	1.03215	9.99814	40
30	8.95240	23	8.95415	24	1.04585	9.99825	30	30	8.96621	23	8.96808	23	1.03192	9.99813	30
40	8.95263	24	8.95439	23	1.04561	9.99825	20	40	8.96644	23	8.96831	23	1.03169	9.99813	20
50	8.95287	23	8.95462	24	1.04538	9.99825	10	50	8.96667	22	8.96854	23	1.03146	9.99813	10
9′ 0	8.95310	23	8.95486	23	1.04514	9.99824	0 51′	19′ 0	8.96689	23	8.96877	22	1.03123	9.99813	0 41′
10	8.95333	24	8.95509	24	1.04491	9.99824	50	10	8.96712	23	8.96899	23	1.03101	9.99813	50
20	8.95357	23	8.95533	23	1.04467	9.99824	40	20	8.96735	22	8.96922	23	1.03078	9.99812	40
30	8.95380	23	8.95556	24	1.04444	9.99824	30	30	8.96757	23	8.96945	23	1.03055	9.99812	30
40	8.95403	24	8.95580	23	1.04420	9.99824	20	40	8.96780	22	8.96968	23	1.03032	9.99812	20
50	8.95427	23	8.95603	24	1.04397	9.99823	10	50	8.96802	23	8.96991	22	1.03009	9.99812	10
10′ 0″	8.95450		8.95627		1.04373	9.99823	0″ 50′	20′ 0″	8.96825		8.97013		1.02987	9.99812	0″ 40′
	Cos	d.	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos	
20′0″	8.96825	22	8.97013	23	1.02987	9.99812	0″ 40′	30′0″	8.98157	22	8.98358	22	1.01642	9.99800	0″ 30′
10	8.96847	23	8.97036	23	1.02964	9.99811	50	10	8.98179	22	8.98380	22	1.01620	9.99799	50
20	8.96870	22	8.97059	22	1.02941	9.99811	40	20	8.98201	22	8.98402	22	1.01598	9.99799	40
30	8.96892	23	8.97081	23	1.02919	9.99811	30	30	8.98223	22	8.98424	22	1.01576	9.99799	30
40	8.96915	22	8.97104	23	1.02896	9.99811	20	40	8.98245	21	8.98446	22	1.01554	9.99799	20
50	8.96937	23	8.97127	23	1.02873	9.99811	10	50	8.98266	22	8.98468	22	1.01532	9.99799	10
21′0	8.96960	22	8.97150	22	1.02850	9.99810	039′	31′0	8.98288	22	8.98490	22	1.01510	9.99798	029′
10	8.96982	23	8.97172	23	1.02828	9.99810	50	10	8.98310	22	8.98512	22	1.01488	9.99798	50
20	8.97005	22	8.97195	23	1.02805	9.99810	40	20	8.98332	22	8.98534	22	1.01466	9.99798	40
30	8.97027	23	8.97218	22	1.02782	9.99810	30	30	8.98354	21	8.98556	22	1.01444	9.99798	30
40	8.97050	22	8.97240	23	1.02760	9.99810	20	40	8.98375	22	8.98578	22	1.01422	9.99798	20
50	8.97072	23	8.97263	22	1.02737	9.99809	10	50	8.98397	22	8.98600	22	1.01400	9.99797	10
22′0	8.97095	22	8.97285	23	1.02715	9.99809	038′	32′0	8.98419	22	8.98622	22	1.01378	9.99797	028′
10	8.97117	22	8.97308	23	1.02692	9.99809	50	10	8.98441	21	8.98644	22	1.01356	9.99797	50
20	8.97139	23	8.97331	22	1.02669	9.99809	40	20	8.98462	22	8.98666	21	1.01334	9.99797	40
30	8.97162	22	8.97353	23	1.02647	9.99809	30	30	8.98484	22	8.98687	22	1.01313	9.99797	30
40	8.97184	23	8.97376	22	1.02624	9.99808	20	40	8.98506	21	8.98709	22	1.01291	9.99796	20
50	8.97207	22	8.97398	23	1.02602	9.99808	10	50	8.98527	22	8.98731	22	1.01269	9.99796	10
23′0	8.97229	22	8.97421	22	1.02579	9.99808	037′	33′0	8.98549	22	8.98753	22	1.01247	9.99796	027′
10	8.97251	23	8.97443	23	1.02557	9.99808	50	10	8.98571	21	8.98775	22	1.01225	9.99796	50
20	8.97274	22	8.97466	22	1.02534	9.99808	40	20	8.98592	22	8.98797	22	1.01203	9.99796	40
30	8.97296	22	8.97488	23	1.02512	9.99807	30	30	8.98614	22	8.98819	22	1.01181	9.99795	30
40	8.97318	23	8.97511	22	1.02489	9.99807	20	40	8.98636	21	8.98841	21	1.01159	9.99795	20
50	8.97341	22	8.97533	23	1.02467	9.99807	10	50	8.98657	22	8.98862	22	1.01138	9.99795	10
24′0	8.97363	22	8.97556	22	1.02444	9.99807	036′	34′0	8.98679	22	8.98884	22	1.01116	9.99795	026′
10	8.97385	22	8.97578	23	1.02422	9.99807	50	10	8.98701	21	8.98906	22	1.01094	9.99794	50
20	8.97407	23	8.97601	22	1.02399	9.99806	40	20	8.98722	22	8.98928	22	1.01072	9.99794	40
30	8.97430	22	8.97623	23	1.02377	9.99806	30	30	8.98744	21	8.98950	21	1.01050	9.99794	30
40	8.97452	22	8.97646	22	1.02354	9.99806	20	40	8.98765	22	8.98971	22	1.01029	9.99794	20
50	8.97474	22	8.97668	23	1.02332	9.99806	10	50	8.98787	21	8.98993	22	1.01007	9.99794	10
25′0	8.97496	22	8.97691	22	1.02309	9.99806	035′	35′0	8.98808	22	8.99015	22	1.00985	9.99793	025′
10	8.97518	23	8.97713	22	1.02287	9.99805	50	10	8.98830	21	8.99037	21	1.00963	9.99793	50
20	8.97541	22	8.97735	23	1.02265	9.99805	40	20	8.98851	22	8.99058	22	1.00942	9.99793	40
30	8.97563	22	8.97758	22	1.02242	9.99805	30	30	8.98873	21	8.99080	22	1.00920	9.99793	30
40	8.97585	22	8.97780	22	1.02220	9.99805	20	40	8.98894	22	8.99102	21	1.00898	9.99793	20
50	8.97607	22	8.97802	23	1.02198	9.99805	10	50	8.98916	21	8.99123	22	1.00877	9.99792	10
26′0	8.97629	22	8.97825	22	1.02175	9.99804	034′	36′0	8.98937	22	8.99145	22	1.00855	9.99792	024′
10	8.97651	23	8.97847	22	1.02153	9.99804	50	10	8.98959	21	8.99167	21	1.00833	9.99792	50
20	8.97674	22	8.97869	23	1.02131	9.99804	40	20	8.98980	22	8.99188	22	1.00812	9.99792	40
30	8.97696	22	8.97892	22	1.02108	9.99804	30	30	8.99002	21	8.99210	22	1.00790	9.99792	30
40	8.97718	22	8.97914	22	1.02086	9.99804	20	40	8.99023	22	8.99232	21	1.00768	9.99791	20
50	8.97740	22	8.97936	23	1.02064	9.99803	10	50	8.99045	21	8.99253	22	1.00747	9.99791	10
27′0	8.97762	22	8.97959	22	1.02041	9.99803	033′	37′0	8.99066	21	8.99275	22	1.00725	9.99791	023′
10	8.97784	22	8.97981	22	1.02019	9.99803	50	10	8.99087	22	8.99297	21	1.00703	9.99791	50
20	8.97806	22	8.98003	22	1.01997	9.99803	40	20	8.99109	21	8.99318	22	1.00682	9.99791	40
30	8.97828	22	8.98025	23	1.01975	9.99803	30	30	8.99130	22	8.99340	21	1.00660	9.99790	30
40	8.97850	22	8.98048	22	1.01952	9.99802	20	40	8.99152	21	8.99361	22	1.00639	9.99790	20
50	8.97872	22	8.98070	22	1.01930	9.99802	10	50	8.99173	21	8.99383	22	1.00617	9.99790	10
28′0	8.97894	22	8.98092	22	1.01908	9.99802	032′	38′0	8.99194	22	8.99405	21	1.00595	9.99790	022′
10	8.97916	22	8.98114	22	1.01886	9.99802	50	10	8.99216	21	8.99426	22	1.00574	9.99790	50
20	8.97938	22	8.98136	23	1.01864	9.99802	40	20	8.99237	21	8.99448	21	1.00552	9.99789	40
30	8.97960	22	8.98159	22	1.01841	9.99801	30	30	8.99258	22	8.99469	22	1.00531	9.99789	30
40	8.97982	22	8.98181	22	1.01819	9.99801	20	40	8.99280	21	8.99491	21	1.00509	9.99789	20
50	8.98004	22	8.98203	22	1.01797	9.99801	10	50	8.99301	21	8.99512	22	1.00488	9.99789	10
29′0	8.98026	22	8.98225	22	1.01775	9.99801	031′	39′0	8.99322	21	8.99534	21	1.00466	9.99788	021′
10	8.98048	22	8.98247	22	1.01753	9.99801	50	10	8.99343	22	8.99555	22	1.00445	9.99788	50
20	8.98070	22	8.98269	22	1.01731	9.99800	40	20	8.99365	21	8.99577	21	1.00423	9.99788	40
30	8.98092	22	8.98291	22	1.01709	9.99800	30	30	8.99386	21	8.99598	22	1.00402	9.99788	30
40	8.98114	22	8.98314	23	1.01686	9.99800	20	40	8.99407	21	8.99620	21	1.00380	9.99788	20
50	8.98135	21	8.98336	22	1.01664	9.99800	10	50	8.99428	22	8.99641	21	1.00359	9.99787	10
30′0″	8.98157	22	8.98358	22	1.01642	9.99800	0″ 30′	40′0″	8.99450		8.99662		1.00338	9.99787	0″ 20′
	Cos	d.	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin	

	Sin	d.	Tang	d.c.	Cotg	Cos			Sin	d.	Tang	d.c.	Cotg	Cos		
10′0″	8.99450	21	8.99662	22	1.00338	9.99787	0″20′	50′0″	9.00704	21	9.00930	21	0.99070	9.99775	0″	10′
10	8.99471	21	8.99684	21	1.00316	9.99787	50	10	9.00725	21	9.00951	20	0.99049	9.99774	50	
20	8.99492	21	8.99705	22	1.00295	9.99787	40	20	9.00746	20	9.00971	21	0.99029	9.99774	40	
30	8.99513	21	8.99727	21	1.00273	9.99787	30	30	9.00766	21	9.00992	21	0.99008	9.99774	30	
40	8.99534	22	8.99748	21	1.00252	9.99786	20	40	9.00787	20	9.01013	21	0.98987	9.99774	20	
50	8.99556	21	8.99769	22	1.00231	9.99786	10	50	9.00807	21	9.01034	21	0.98966	9.99773	10	
11′0	8.99577	21	8.99791	21	1.00209	9.99786	0 19′	51′0	9.00828	20	9.01055	20	0.98945	9.99773	0	9′
10	8.99598	21	8.99812	22	1.00188	9.99786	50	10	9.00848	21	9.01075	21	0.98925	9.99773	50	
20	8.99619	21	8.99834	21	1.00166	9.99786	40	20	9.00869	20	9.01096	21	0.98904	9.99773	40	
30	8.99640	21	8.99855	21	1.00145	9.99785	30	30	9.00889	21	9.01117	21	0.98883	9.99773	30	
40	8.99661	21	8.99876	22	1.00124	9.99785	20	40	9.00910	20	9.01138	20	0.98862	9.99772	20	
50	8.99682	22	8.99898	21	1.00102	9.99785	10	50	9.00930	21	9.01158	21	0.98842	9.99772	10	
12′0	8.99704	21	8.99919	21	1.00081	9.99785	0 18′	52′0	9.00951	20	9.01179	21	0.98821	9.99772	0	8′
10	8.99725	21	8.99940	21	1.00060	9.99785	50	10	9.00971	20	9.01200	20	0.98800	9.99772	50	
20	8.99746	21	8.99961	22	1.00039	9.99784	40	20	9.00992	21	9.01220	21	0.98780	9.99772	40	
30	8.99767	21	8.99983	21	1.00017	9.99784	30	30	9.01012	20	9.01241	21	0.98759	9.99771	30	
40	8.99788	21	9.00004	21	0.99996	9.99784	20	40	9.01033	21	9.01262	20	0.98738	9.99771	20	
50	8.99809	21	9.00025	21	0.99975	9.99784	10	50	9.01053	20	9.01282	21	0.98718	9.99771	10	
13′0	8.99830	21	9.00046	22	0.99954	9.99783	0 17′	53′0	9.01074	20	9.01303	21	0.98697	9.99771	0	7′
10	8.99851	21	9.00068	21	0.99932	9.99783	50	10	9.01094	21	9.01324	20	0.98676	9.99770	50	
20	8.99872	21	9.00089	21	0.99911	9.99783	40	20	9.01115	20	9.01344	21	0.98656	9.99770	40	
30	8.99893	21	9.00110	21	0.99890	9.99783	30	30	9.01135	20	9.01365	21	0.98635	9.99770	30	
40	8.99914	21	9.00131	22	0.99869	9.99783	20	40	9.01155	20	9.01386	20	0.98614	9.99770	20	
50	8.99935	21	9.00153	21	0.99847	9.99782	10	50	9.01176	21	9.01406	21	0.98594	9.99770	10	
14′0	8.99956	21	9.00174	21	0.99826	9.99782	0 16′	54′0	9.01196	20	9.01427	20	0.98573	9.99769	0	6′
10	8.99977	21	9.00195	21	0.99805	9.99782	50	10	9.01217	21	9.01447	21	0.98553	9.99769	30	
20	8.99998	21	9.00216	21	0.99784	9.99782	40	20	9.01237	20	9.01468	21	0.98532	9.99769	40	
30	9.00019	21	9.00237	21	0.99763	9.99782	30	30	9.01257	20	9.01489	20	0.98511	9.99769	30	
40	9.00040	21	9.00258	22	0.99742	9.99781	20	40	9.01278	21	9.01509	21	0.98491	9.99768	20	
50	9.00061	21	9.00280	21	0.99720	9.99781	10	50	9.01298	20	9.01530	20	0.98470	9.99768	10	
15′0	9.00082	21	9.00301	21	0.99699	9.99781	0 15′	55′0	9.01318	20	9.01550	21	0.98450	9.99768	0	5′
10	9.00103	20	9.00322	21	0.99678	9.99781	50	10	9.01339	20	9.01571	20	0.98429	9.99768	50	
20	9.00123	21	9.00343	21	0.99657	9.99781	40	20	9.01359	20	9.01591	21	0.98409	9.99768	40	
30	9.00144	21	9.00364	21	0.99636	9.99780	30	30	9.01379	20	9.01612	20	0.98388	9.99767	30	
40	9.00165	21	9.00385	21	0.99615	9.99780	20	40	9.01399	21	9.01632	21	0.98368	9.99767	20	
50	9.00186	21	9.00406	21	0.99594	9.99780	10	50	9.01420	20	9.01653	20	0.98347	9.99767	10	
16′0	9.00207	21	9.00427	21	0.99573	9.99780	0 11′	56′0	9.01440	20	9.01673	21	0.98327	9.99767	0	4′
10	9.00228	21	9.00448	21	0.99552	9.99779	50	10	9.01460	20	9.01694	20	0.98306	9.99766	50	
20	9.00249	20	9.00469	21	0.99531	9.99779	40	20	9.01481	21	9.01714	21	0.98286	9.99766	40	
30	9.00269	21	9.00490	21	0.99510	9.99779	30	30	9.01501	20	9.01735	20	0.98265	9.99766	30	
40	9.00290	21	9.00511	21	0.99489	9.99779	20	40	9.01521	20	9.01755	21	0.98245	9.99766	20	
50	9.00311	21	9.00532	21	0.99468	9.99779	10	50	9.01541	20	9.01776	20	0.98224	9.99766	10	
17′0	9.00332	21	9.00553	21	0.99447	9.99778	0 13′	57′0	9.01561	21	9.01796	20	0.98204	9.99765	0	3′
10	9.00353	20	9.00574	21	0.99426	9.99778	50	10	9.01582	20	9.01816	21	0.98184	9.99765	50	
20	9.00373	21	9.00595	21	0.99405	9.99778	40	20	9.01602	20	9.01837	20	0.98163	9.99765	40	
30	9.00394	21	9.00616	21	0.99384	9.99778	30	30	9.01622	20	9.01857	21	0.98143	9.99765	30	
40	9.00415	21	9.00637	21	0.99363	9.99778	20	40	9.01642	20	9.01878	20	0.98122	9.99765	20	
50	9.00436	20	9.00658	21	0.99342	9.99777	10	50	9.01662	20	9.01898	20	0.98102	9.99764	10	
18′0	9.00456	21	9.00679	21	0.99321	9.99777	0 12′	58′0	9.01682	21	9.01918	21	0.98082	9.99764	0	2′
10	9.00477	21	9.00700	21	0.99300	9.99777	50	10	9.01703	20	9.01939	20	0.98061	9.99764	50	
20	9.00498	20	9.00721	21	0.99279	9.99777	40	20	9.01723	20	9.01959	20	0.98041	9.99764	40	
30	9.00518	21	9.00742	21	0.99258	9.99776	30	30	9.01743	20	9.01979	21	0.98021	9.99763	30	
40	9.00539	21	9.00763	21	0.99237	9.99776	20	40	9.01763	20	9.02000	20	0.98000	9.99763	20	
50	9.00560	21	9.00784	21	0.99216	9.99776	10	50	9.01783	20	9.02020	20	0.97980	9.99763	10	
19′0	9.00581	20	9.00805	21	0.99195	9.99776	0 11′	59′0	9.01803	20	9.02040	21	0.97960	9.99763	0	1′
10	9.00601	21	9.00826	20	0.99174	9.99776	50	10	9.01823	20	9.02061	20	0.97939	9.99763	50	
20	9.00622	20	9.00846	21	0.99154	9.99775	40	20	9.01843	20	9.02081	20	0.97919	9.99762	40	
30	9.00642	21	9.00867	21	0.99133	9.99775	30	30	9.01863	20	9.02101	20	0.97899	9.99762	30	
40	9.00663	21	9.00888	21	0.99112	9.99775	20	40	9.01883	20	9.02121	21	0.97879	9.99762	20	
50	9.00684	20	9.00909	21	0.99091	9.99775	10	50	9.01903	20	9.02142	20	0.97858	9.99762	10	
20′0	9.00704		9.00930		0.99070	9.99775	0″10′	60′0″	9.01923		9.02162		0.97838	9.99761	0′	0′
	Cos	d	Cotg	d.c.	Tang	Sin			Cos	d.	Cotg	d.c.	Tang	Sin		

′	Sin	d.	Tang	d.c	Cotg	Cos	′
0	9.01923	120	9.02162	121	0.97838	9.99761	60
1	9.02043	120	9.02283	121	0.97717	9.99760	59
2	9.02163	120	9.02404	121	0.97596	9.99759	58
3	9.02283	119	9.02525	120	0.97475	9.99757	57
4	9.02402	118	9.02645	121	0.97355	9.99756	56
5	9.02520	119	9.02766	119	0.97234	9.99755	55
6	9.02639	118	9.02885	120	0.97115	9.99753	54
7	9.02757	117	9.03005	119	0.96995	9.99752	53
8	9.02874	118	9.03124	118	0.96876	9.99751	52
9	9.02992	117	9.03242	119	0.96758	9.99749	51
10	9.03109	117	9.03361	118	0.96639	9.99748	50
11	9.03226	116	9.03479	118	0.96521	9.99747	49
12	9.03342	116	9.03597	117	0.96403	9.99745	48
13	9.03458	116	9.03714	118	0.96286	9.99744	47
14	9.03574	116	9.03832	116	0.96168	9.99742	46
15	9.03690	115	9.03948	117	0.96052	9.99741	45
16	9.03805	115	9.04065	116	0.95935	9.99740	44
17	9.03920	114	9.04181	116	0.95819	9.99738	43
18	9.04034	115	9.04297	116	0.95703	9.99737	42
19	9.04149	113	9.04413	115	0.95587	9.99736	41
20	9.04262	114	9.04528	115	0.95472	9.99734	40
21	9.04376	114	9.04643	115	0.95357	9.99733	39
22	9.04490	113	9.04758	115	0.95242	9.99731	38
23	9.04603	112	9.04873	114	0.95127	9.99730	37
24	9.04715	113	9.04987	114	0.95013	9.99728	36
25	9.04828	112	9.05101	113	0.94899	9.99727	35
26	9.04940	112	9.05214	114	0.94786	9.99726	34
27	9.05052	112	9.05328	113	0.94672	9.99724	33
28	9.05164	111	9.05441	112	0.94559	9.99723	32
29	9.05275	111	9.05553	113	0.94447	9.99721	31
30	9.05386	111	9.05666	112	0.94334	9.99720	30
31	9.05497	110	9.05778	112	0.94222	9.99718	29
32	9.05607	110	9.05890	112	0.94110	9.99717	28
33	9.05717	110	9.06002	111	0.93998	9.99716	27
34	9.05827	110	9.06113	111	0.93887	9.99714	26
35	9.05937	109	9.06224	111	0.93776	9.99713	25
36	9.06046	109	9.06335	110	0.93665	9.99711	24
37	9.06155	109	9.06445	111	0.93555	9.99710	23
38	9.06264	108	9.06556	110	0.93444	9.99708	22
39	9.06372	109	9.06666	109	0.93334	9.99707	21
40	9.06481	108	9.06775	110	0.93225	9.99705	20
41	9.06589	107	9.06885	109	0.93115	9.99704	19
42	9.06696	108	9.06994	109	0.93006	9.99702	18
43	9.06804	107	9.07103	108	0.92897	9.99701	17
44	9.06911	107	9.07211	109	0.92789	9.99699	16
45	9.07018	106	9.07320	108	0.92680	9.99698	15
46	9.07124	107	9.07428	108	0.92572	9.99696	14
47	9.07231	106	9.07536	107	0.92464	9.99695	13
48	9.07337	105	9.07643	108	0.92357	9.99693	12
49	9.07442	106	9.07751	107	0.92249	9.99692	11
50	9.07548	105	9.07858	106	0.92142	9.99690	10
51	9.07653	105	9.07964	107	0.92036	9.99689	9
52	9.07758	105	9.08071	106	0.91929	9.99687	8
53	9.07863	105	9.08177	106	0.91823	9.99686	7
54	9.07968	104	9.08283	106	0.91717	9.99684	6
55	9.08072	104	9.08389	106	0.91611	9.99683	5
56	9.08176	104	9.08495	105	0.91505	9.99681	4
57	9.08280	103	9.08600	105	0.91400	9.99680	3
58	9.08383	103	9.08705	105	0.91295	9.99678	2
59	9.08486	103	9.08810	104	0.91190	9.99677	1
60	9.08589		9.08914		0.91086	9.99675	0
′	Cos	d.	Cotg	d.c.	Tang	Sin	′

″	P. P.																
	121	120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105
1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3
3	6	6	6	6	6	6	6	6	6	6	6	5	5	5	5	5	5
4	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	7	7
5	10	10	10	10	10	10	10	9	9	9	9	9	9	9	9	9	9
6	12	12	12	12	12	12	11	11	11	11	11	11	11	11	11	11	10
7	14	14	14	14	14	14	13	13	13	13	13	13	13	13	12	12	12
8	16	16	16	16	16	15	15	15	15	15	15	15	15	14	14	14	14
9	18	18	18	18	18	17	17	17	17	17	17	16	16	16	16	16	16
10	20	20	20	20	19	19	19	19	19	19	18	18	18	18	18	18	17
11	22	22	22	22	21	21	21	21	21	21	20	20	20	20	20	19	19
12	24	24	24	24	23	23	23	23	23	22	22	22	22	22	21	21	21
13	26	26	26	26	25	25	25	25	24	24	24	24	24	23	23	23	23
14	28	28	28	28	27	27	27	27	26	26	26	26	25	25	25	25	24
15	30	30	30	29	29	29	29	28	28	28	28	27	27	27	27	26	26
16	32	32	32	31	31	31	31	30	30	30	30	29	29	29	29	28	28
17	34	34	34	33	33	33	33	32	32	32	31	31	31	31	30	30	30
18	36	36	36	35	35	35	34	34	34	34	33	33	33	32	32	32	31
19	38	38	38	37	37	37	36	36	36	35	35	35	35	34	34	34	33
20	40	40	40	39	39	39	38	38	38	37	37	37	36	36	36	35	35
21	42	42	42	41	41	41	40	40	40	39	39	38	38	38	37	37	37
22	44	44	44	43	43	43	42	42	41	41	41	40	40	40	39	39	38
23	46	46	46	45	45	44	44	44	43	43	43	42	42	41	41	41	40
24	48	48	48	47	47	46	46	46	45	45	44	44	44	43	43	42	42
25	50	50	50	49	49	48	48	47	47	47	46	46	45	45	45	44	44
26	52	52	52	51	51	50	50	49	49	49	48	48	47	47	46	46	45
27	54	54	54	53	53	52	52	51	51	50	50	49	49	49	48	48	47
28	56	56	56	55	55	54	54	53	53	52	52	51	51	50	50	49	49
29	58	58	58	57	57	56	56	55	55	54	54	53	53	52	52	51	51
30	60	60	59	59	58	58	57	57	56	56	55	55	54	54	53	53	52
31	63	62	61	61	60	60	59	59	58	58	57	57	56	56	55	55	54
32	65	64	63	63	62	62	61	61	60	60	59	59	58	58	57	57	56
33	67	66	65	65	64	64	63	63	62	62	61	60	60	59	59	58	58
34	69	68	67	67	66	66	65	65	64	63	63	62	62	61	61	60	59
35	71	70	69	69	68	68	67	66	66	65	65	64	64	63	62	62	61
36	73	72	71	71	70	70	69	68	68	67	67	66	65	65	64	64	63
37	75	74	73	73	72	72	71	70	70	69	68	68	67	67	66	65	65
38	77	76	75	75	74	73	73	72	72	71	70	70	69	68	68	67	66
39	79	78	77	77	76	75	75	74	73	73	72	71	71	70	70	69	68
40	81	80	79	79	78	77	77	76	75	75	74	73	73	72	71	71	70
41	83	82	81	81	80	79	79	78	77	77	76	75	74	74	73	72	72
42	85	84	83	83	82	81	80	80	79	78	78	77	76	76	75	74	73
43	87	86	85	85	84	83	82	82	81	80	80	79	78	77	77	76	75
44	89	88	87	87	86	85	84	84	83	82	81	81	80	79	78	78	77
45	91	90	89	88	88	87	86	85	85	84	83	82	82	81	80	79	79
46	93	92	91	90	90	89	88	87	87	86	85	84	84	83	82	81	80
47	95	94	93	92	92	91	90	89	89	88	87	86	85	85	84	83	82
48	97	96	95	94	94	93	92	91	90	90	89	88	87	86	86	85	84
49	99	98	97	96	96	95	94	93	92	91	91	90	89	88	87	87	86
50	01	00	99	98	97	97	96	95	94	93	92	92	91	90	89	88	87
51	03	02	01	00	99	99	98	97	96	95	94	93	93	92	91	90	89
52	05	04	03	02	01	01	00	99	98	97	96	95	94	94	93	92	91
53	07	06	05	04	03	02	02	01	00	99	98	97	96	95	95	94	93
54	09	08	07	06	05	04	03	03	02	01	00	99	98	97	96	95	94
55	11	10	09	08	07	06	05	04	04	03	02	01	00	99	98	97	96
56	13	12	11	10	09	08	07	06	05	05	04	03	02	01	00	99	98
57	15	14	13	12	11	10	09	08	07	06	05	04	04	03	02	01	00
58	17	16	15	14	13	12	11	10	09	08	07	06	05	04	03	02	01
59	19	18	17	16	15	14	13	12	11	10	09	08	07	06	05	04	03
60	21	20	19	18	17	16	15	14	13	12	11	10	09	08	07	06	05
″																	

Въ пропорціональныхъ частяхъ по недостатку мѣста сотня выпущена начиная съ 50″.

′	Sin	d.	Tang	d.c.	Cotg	Cos	′
0	9.08589	103	9.08914	105	0.91086	9.99675	60
1	9.08692	103	9.09019	104	0.90981	9.99674	59
2	9.08795	102	9.09123	104	0.90877	9.99672	58
3	9.08897	102	9.09227	103	0.90773	9.99670	57
4	9.08999	102	9.09330	104	0.90670	9.99669	56
5	9.09101	101	9.09434	103	0.90566	9.99667	55
6	9.09202	102	9.09537	103	0.90463	9.99666	54
7	9.09304	101	9.09640	102	0.90360	9.99664	53
8	9.09405	101	9.09742	103	0.90258	9.99663	52
9	9.09506	100	9.09845	102	0.90155	9.99661	51
10	9.09606	101	9.09947	102	0.90053	9.99659	50
11	9.09707	100	9.10049	101	0.89951	9.99658	49
12	9.09807	100	9.10150	102	0.89850	9.99656	48
13	9.09907	99	9.10252	101	0.89748	9.99655	47
14	9.10006	100	9.10353	101	0.89647	9.99653	46
15	9.10106	99	9.10454	101	0.89546	9.99651	45
16	9.10205	99	9.10555	101	0.89445	9.99650	44
17	9.10304	98	9.10656	100	0.89344	9.99648	43
18	9.10402	99	9.10756	100	0.89244	9.99647	42
19	9.10501	98	9.10856	100	0.89144	9.99645	41
20	9.10599	98	9.10956	100	0.89044	9.99643	40
21	9.10697	98	9.11056	99	0.88944	9.99642	39
22	9.10795	98	9.11155	99	0.88845	9.99640	38
23	9.10893	97	9.11254	99	0.88746	9.99638	37
24	9.10990	97	9.11353	99	0.88647	9.99637	36
25	9.11087	97	9.11452	99	0.88548	9.99635	35
26	9.11184	97	9.11551	98	0.88449	9.99633	34
27	9.11281	96	9.11649	98	0.88351	9.99632	33
28	9.11377	97	9.11747	98	0.88253	9.99630	32
29	9.11474	96	9.11845	98	0.88155	9.99629	31
30	9.11570	96	9.11943	97	0.88057	9.99627	30
31	9.11666	95	9.12040	98	0.87960	9.99625	29
32	9.11761	96	9.12138	97	0.87862	9.99624	28
33	9.11857	95	9.12235	97	0.87765	9.99622	27
34	9.11952	95	9.12332	96	0.87668	9.99620	26
35	9.12047	95	9.12428	97	0.87572	9.99618	25
36	9.12142	94	9.12525	96	0.87475	9.99617	24
37	9.12236	95	9.12621	96	0.87379	9.99615	23
38	9.12331	94	9.12717	96	0.87283	9.99613	22
39	9.12425	94	9.12813	96	0.87187	9.99612	21
40	9.12519	93	9.12909	95	0.87091	9.99610	20
41	9.12612	94	9.13004	95	0.86996	9.99608	19
42	9.12706	93	9.13099	95	0.86901	9.99607	18
43	9.12799	93	9.13194	95	0.86806	9.99605	17
44	9.12892	93	9.13289	95	0.86711	9.99603	16
45	9.12985	93	9.13384	94	0.86616	9.99601	15
46	9.13078	93	9.13478	95	0.86522	9.99600	14
47	9.13171	92	9.13573	94	0.86427	9.99598	13
48	9.13263	92	9.13667	94	0.86333	9.99596	12
49	9.13355	92	9.13761	93	0.86239	9.99595	11
50	9.13447	92	9.13854	94	0.86146	9.99593	10
51	9.13539	91	9.13948	93	0.86052	9.99591	9
52	9.13630	92	9.14041	93	0.85959	9.99589	8
53	9.13722	91	9.14134	93	0.85866	9.99588	7
54	9.13813	91	9.14227	93	0.85773	9.99586	6
55	9.13904	90	9.14320	92	0.85680	9.99584	5
56	9.13994	91	9.14412	92	0.85588	9.99582	4
57	9.14085	90	9.14504	93	0.85496	9.99581	3
58	9.14175	91	9.14597	91	0.85403	9.99579	2
59	9.14266	90	9.14688	92	0.85312	9.99577	1
60	9.14356		9.14780		0.85220	9.99575	0
′	Cos	d.	Cotg	d.c.	Tang	Sin	′

″	P. P.													
	104	103	102	101	100	99	98	97	96	95	94	93	92	91	90
1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1
2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4
4	7	7	7	7	7	7	7	6	6	6	6	6	6	6	6
5	9	9	8	8	8	8	8	8	8	8	8	8	8	8	7
6	10	10	10	10	10	10	10	10	10	9	9	9	9	9	9
7	12	12	12	12	12	12	11	11	11	11	11	11	11	11	10
8	14	14	14	13	13	13	13	13	13	13	13	12	12	12	12
9	16	15	15	15	15	15	15	15	14	14	14	14	14	14	13
10	17	17	17	17	17	16	16	16	16	16	16	15	15	15	15
11	19	19	19	19	18	18	18	18	18	17	17	17	17	17	16
12	21	21	20	20	20	20	20	19	19	19	19	19	18	18	18
13	23	22	22	22	22	21	21	21	21	21	20	20	20	20	19
14	24	24	24	24	23	23	23	23	22	22	22	22	21	21	21
15	26	26	25	25	25	25	24	24	24	24	23	23	23	23	22
16	28	27	27	27	27	26	26	26	26	25	25	25	25	24	24
17	29	29	29	29	28	28	28	27	27	27	27	26	26	26	25
18	31	31	31	30	30	30	29	29	29	28	28	28	28	27	27
19	33	33	32	32	32	31	31	31	30	30	30	29	29	29	28
20	35	34	34	34	33	33	33	32	32	32	31	31	31	30	30
21	36	36	36	35	35	35	34	34	34	33	33	33	32	32	31
22	38	38	37	37	37	36	36	36	35	35	34	34	34	33	33
23	40	39	39	39	38	38	38	37	37	36	36	36	35	35	34
24	42	41	41	40	40	40	39	39	38	38	38	37	37	36	36
25	43	43	42	42	42	41	41	40	40	40	39	39	38	38	37
26	45	45	44	44	43	43	42	42	42	41	41	40	40	39	39
27	47	46	46	45	45	45	44	44	43	43	42	42	41	41	40
28	49	48	48	47	47	46	46	45	45	44	44	43	43	42	42
29	50	50	49	49	48	48	47	47	46	46	45	45	44	44	43
30	52	51	51	50	50	49	49	48	48	47	47	46	46	45	45
31	54	53	53	52	52	51	51	50	50	49	49	48	48	47	46
32	55	55	54	54	53	53	52	52	51	51	50	50	49	49	48
33	57	57	56	56	55	54	54	53	53	52	52	51	51	50	49
34	59	58	58	57	57	56	56	55	54	54	53	53	52	52	51
35	61	60	59	59	58	58	57	57	56	55	55	54	54	53	52
36	62	62	61	61	60	59	59	58	58	57	56	56	55	55	54
37	64	64	63	62	62	61	60	60	59	59	58	57	57	56	55
38	66	65	65	64	63	63	62	61	61	60	60	59	58	58	57
39	68	67	66	66	65	64	64	63	62	62	61	60	60	59	58
40	69	69	68	67	67	66	65	65	64	63	63	62	61	61	60
41	71	70	70	69	68	68	67	66	66	65	64	64	63	62	61
42	73	72	71	71	70	69	69	68	67	66	66	65	64	64	63
43	75	74	73	72	72	71	70	70	69	68	67	67	66	65	64
44	76	76	75	74	73	73	72	71	70	70	69	68	67	67	66
45	78	77	76	76	75	74	73	73	72	71	70	70	69	68	67
46	80	79	78	77	77	76	75	74	74	73	72	71	71	70	69
47	81	81	80	79	78	78	77	76	75	74	74	73	72	71	70
48	83	82	82	81	80	79	78	78	77	76	75	74	74	73	72
49	85	84	83	82	82	81	80	79	78	78	77	76	75	74	73
50	87	86	85	84	83	82	82	81	80	79	78	77	77	76	75
51	88	88	87	86	85	84	83	82	82	81	80	79	78	77	76
52	90	89	88	88	87	86	85	84	83	82	81	81	80	79	78
53	92	91	90	89	88	87	87	86	85	84	83	82	81	80	79
54	94	93	92	91	90	89	88	87	86	85	85	84	83	82	81
55	95	94	93	93	92	91	90	89	88	87	86	85	84	83	82
56	97	96	95	94	93	92	91	91	90	89	88	87	86	85	84
57	99	98	97	96	97	94	93	92	91	90	89	88	87	86	85
58	101	100	99	98	97	96	95	94	93	92	91	90	89	88	87
59	102	101	100	99	98	97	96	95	94	93	92	91	90	89	88
60	104	103	102	101	100	99	98	97	96	95	94	93	92	91	90
″	P. P.														

′	Sin	d.	Tang	d.c	Cotg	Cos	′
0	9.14356	89	9.14780	92	0.85220	9.99575	60
1	9.14445	90	9.14872	91	0.85128	9.99574	59
2	9.14535	89	9.14963	91	0.85037	9.99572	58
3	9.14624	90	9.15054	91	0.84946	9.99570	57
4	9.14714	89	9.15145	91	0.84855	9.99568	56
5	9.14803	88	9.15236	91	0.84764	9.99566	55
6	9.14891	89	9.15327	90	0.84673	9.99565	54
7	9.14980	89	9.15417	91	0.84583	9.99563	53
8	9.15069	88	9.15508	90	0.84492	9.99561	52
9	9.15157	88	9.15598	90	0.84402	9.99559	51
10	9.15245	88	9.15688	89	0.84312	9.99557	50
11	9.15333	88	9.15777	90	0.84223	9.99556	49
12	9.15421	87	9.15867	89	0.84133	9.99554	48
13	9.15508	88	9.15956	90	0.84044	9.99552	47
14	9.15596	87	9.16046	89	0.83954	9.99550	46
15	9.15683	87	9.16135	89	0.83865	9.99548	45
16	9.15770	87	9.16224	88	0.83776	9.99546	44
17	9.15857	87	9.16312	89	0.83688	9.99545	43
18	9.15944	86	9.16401	88	0.83599	9.99543	42
19	9.16030	86	9.16489	88	0.83511	9.99541	41
20	9.16116	87	9.16577	88	0.83423	9.99539	40
21	9.16203	86	9.16665	88	0 83335	9.99537	39
22	9.16289	85	9.16753	88	0.83247	9.99535	38
23	9.16374	86	9.16841	87	0.83159	9.99533	37
24	9.16460	85	9.16928	88	0.83072	9.99532	36
25	9.16545	86	9.17016	87	0 82984	9.99530	35
26	9.16631	85	9.17103	87	0.82897	9.99528	34
27	9.16716	85	9.17190	87	0.82810	9.99526	33
28	9.16801	85	9.17277	86	0.82723	9.99524	32
29	9.16886	84	9.17363	87	0.82637	9.99522	31
30	9.16970	85	9.17450	86	0.82550	9.99520	30
31	9.17055	84	9.17536	86	0.82464	9.99518	29
32	9.17139	84	9.17622	86	0.82378	9.99517	28
33	9.17223	84	9.17708	86	0.82292	9.99515	27
34	9.17307	84	9.17794	86	0.82206	9.99513	26
35	9.17391	83	9.17880	85	0.82120	9.99511	25
36	9.17474	84	9.17965	86	0.82035	9.99509	24
37	9.17558	83	9.18051	85	0.81949	9.99507	23
38	9.17641	83	9.18136	85	0.81864	9.99505	22
39	9.17724	83	9.18221	85	0.81779	9.99503	21
40	9.17807	83	9.18306	85	0.81694	9.99501	20
41	9.17890	83	9.18391	84	0.81609	9.99499	19
42	9.17973	82	9.18475	85	0.81525	9.99497	18
43	9.18055	82	9.18560	84	0.81440	9.99495	17
44	9.18137	83	9.18644	84	0.81356	9.99494	16
45	9.18220	82	9.18728	84	0.81272	9.99492	15
46	9.18302	81	9.18812	84	0.81188	9.99490	14
47	9.18383	82	9.18896	83	0.81104	9.99488	13
48	9.18465	82	9.18979	84	0.81021	9.99486	12
49	9.18547	81	9.19063	83	0.80937	9.99484	11
50	9.18628	81	9.19146	83	0.80854	9.99482	10
51	9.18709	81	9.19229	83	0.80771	9.99480	9
52	9.18790	81	9.19312	83	0.80688	9.99478	8
53	9.18871	81	9.19395	83	0.80605	9.99476	7
54	9.18952	81	9.19478	83	0.80522	9.99474	6
55	9.19033	80	9.19561	82	0.80439	9.99472	5
56	9.19113	80	9 19643	82	0.80357	9.99470	4
57	9.19193	80	9.19725	82	0.80275	9.99468	3
58	9.19273	80	9.19807	82	0.80193	9.99466	2
59	9.19353	80	9.19889	82	0.80111	9.99464	1
60	9.19433		9.19971		0.80029	9.99462	0
′	Cos	d.	Cotg	d.c.	Tang	Sin	′

′	P. P.												
	92	91	90	89	88	87	86	85	84	83	82	81	80
1	2	2	1	1	1	1	1	1	1	1	1	1	1
2	3	3	3	3	3	3	3	3	3	3	3	3	3
3	5	5	4	4	4	4	4	4	4	4	4	4	4
4	6	6	6	6	6	6	6	6	6	6	5	5	5
5	8	8	7	7	7	7	7	7	7	7	7	7	7
6	9	9	9	9	9	9	9	8	8	8	8	8	8
7	11	11	10	10	10	10	10	10	10	10	10	9	9
8	12	12	12	12	12	12	11	11	11	11	11	11	11
9	14	14	13	13	13	13	13	13	13	12	12	12	12
10	15	15	15	15	15	14	14	14	14	14	14	13	13
11	17	17	16	16	16	16	16	16	15	15	15	15	15
12	18	18	18	18	18	17	17	17	17	17	16	16	16
13	20	20	19	19	19	19	19	18	18	18	18	18	17
14	21	21	21	21	21	20	20	20	20	19	19	19	19
15	23	23	22	22	22	22	21	21	21	21	20	20	20
16	25	24	24	24	23	23	23	23	22	22	22	22	21
17	26	26	25	25	25	25	24	24	24	24	23	23	23
18	28	27	27	27	26	26	26	25	25	25	25	24	24
19	29	29	28	28	28	28	27	27	27	26	26	26	25
20	31	30	30	30	29	29	29	28	28	28	27	27	27
21	32	32	31	31	31	30	30	30	29	29	29	28	28
22	34	33	33	33	32	32	32	31	31	30	30	30	29
23	35	35	34	34	34	33	33	33	32	32	31	31	31
24	37	36	36	36	35	35	34	34	34	33	33	32	32
25	38	38	37	37	37	36	36	35	35	35	34	34	33
26	40	39	39	39	38	38	37	37	36	36	36	35	35
27	41	41	40	40	40	39	39	38	38	37	37	36	36
28	43	42	42	42	41	41	40	40	39	39	38	38	37
29	44	44	43	43	43	42	42	41	41	40	40	39	39
30	46	45	45	44	44	43	43	42	42	41	41	40	40
31	48	47	46	46	45	45	44	44	43	43	42	42	41
32	49	49	48	47	47	46	46	45	45	44	44	43	43
33	51	50	49	49	48	48	47	47	46	46	45	45	44
34	52	52	51	50	50	49	49	48	48	47	46	46	45
35	54	53	52	52	51	51	50	50	49	48	48	47	47
36	55	55	54	53	53	52	52	51	50	50	49	49	48
37	57	56	55	55	54	54	53	52	52	51	51	50	49
38	58	58	57	56	56	55	54	54	53	53	52	51	51
39	60	59	58	58	57	57	56	55	55	54	53	53	52
40	61	61	60	59	59	58	57	57	56	55	55	54	53
41	63	62	61	61	60	59	59	58	57	57	56	55	55
42	64	64	63	62	62	61	60	59	59	58	57	57	56
43	66	65	64	64	63	62	62	61	60	59	59	58	57
44	67	67	66	65	65	64	63	62	62	61	60	59	59
45	69	68	67	67	66	65	64	64	63	62	61	61	60
46	71	70	69	68	67	67	66	65	64	64	63	62	61
47	72	71	70	70	69	68	67	67	66	65	64	63	63
48	74	73	72	71	70	70	69	68	67	66	66	65	64
49	75	74	73	73	72	71	70	69	69	68	67	66	65
50	77	76	75	74	73	72	72	71	70	69	68	67	67
51	78	77	76	76	75	74	73	72	71	71	70	69	68
52	80	79	78	77	76	75	75	74	73	72	71	70	69
53	81	80	79	79	78	77	76	75	74	73	72	72	71
54	83	82	81	80	79	78	77	76	76	75	74	73	72
55	84	73	82	82	81	80	79	78	77	76	75	74	73
56	86	85	84	83	82	81	80	79	78	77	77	76	75
57	87	86	85	85	84	83	82	81	80	79	78	77	76
58	89	88	87	86	85	84	83	82	81	80	79	78	77
59	90	89	88	88	87	86	85	84	83	82	81	80	79
60	92	91	90	89	88	87	86	85	84	83	82	81	80
′	P. P.												

′	Sin	d.	Tang	d.c.	Cotg	Cos	′
0	9.19433	80	9.19971	82	0.80029	9.99462	60
1	9.19513	79	9.20053	81	0.79947	9.99460	59
2	9.19592	80	9.20134	82	0.79866	9.99458	58
3	9.19672	79	9.20216	81	0.79784	9.99456	57
4	9.19751	79	9.20297	81	0.79703	9.99454	56
5	9.19830	79	9.20378	81	0.79622	9.99452	55
6	9.19909	79	9.20459	81	0.79541	9.99450	54
7	9.19988	79	9.20540	81	0.79460	9.99448	53
8	9.20067	78	9.20621	80	0.79379	9.99446	52
9	9.20145	78	9.20701	81	0.79299	9 99444	51
10	9.20223	79	9.20782	80	0.79218	9.99442	50
11	9.20302	78	9.20862	80	0.79138	9.99440	49
12	9.20380	78	9.20942	80	0.79058	9.99438	48
13	9.20458	77	9.21022	80	0.78978	9 99436	47
14	9.20535	78	9.21102	80	0.78898	9.99434	46
15	9.20613	78	9.21182	79	0.78818	9.99432	45
16	9.20691	77	9.21261	80	0.78739	9.99429	44
17	9.20768	77	9.21341	79	0.78659	9.99427	43
18	9.20845	77	9.21420	79	0.78580	9.99425	42
19	9.20922	77	9.21499	79	0.78501	9.99423	41
20	9.20999	77	9.21578	79	0.78422	9.99421	40
21	9.21076	77	9.21657	79	0.78343	9.99419	39
22	9.21153	76	9.21736	78	0.78264	9.99417	38
23	9.21229	77	9.21814	79	0.78186	9.99415	37
24	9.21306	76	9.21893	78	0.78107	9.99413	36
25	9.21382	76	9.21971	78	0.78029	9.99411	35
26	9.21458	76	9.22049	78	0.77951	9.99409	34
27	9.21534	76	9.22127	78	0.77873	9.99407	33
28	9.21610	75	9.22205	78	0.77795	9.99404	32
29	9.21685	76	9.22283	78	0.77717	9.99402	31
30	9.21761	75	9.22361	77	0.77639	9.99400	30
31	9.21836	76	9.22438	78	0.77562	9.99398	29
32	9.21912	75	9.22516	77	0.77484	9.99396	28
33	9.21987	75	9.22593	77	0.77407	9.99394	27
34	9.22062	75	9.22670	77	0.77330	9.99392	26
35	9.22137	74	9.22747	77	0.77253	9.99390	25
36	9.22211	75	9.22824	77	0.77176	9.99388	24
37	9.22286	75	9.22901	76	0.77099	9.99385	23
38	9.22361	74	9.22977	77	0.77023	9.99383	22
39	9.22435	74	9.23054	76	0.76946	9.99381	21
40	9.22509	74	9.23130	76	0.76870	9.99379	20
41	9.22583	74	9.23206	77	0.76794	9.99377	19
42	9.22657	74	9.23283	76	0.76717	9.99375	18
43	9.22731	74	9.23359	76	0.76641	9.99372	17
44	9.22805	73	9.23435	75	0.76565	9.99370	16
45	9.22878	74	9.23510	76	0.76490	9.99368	15
46	9.22952	73	9.23586	75	0.76414	9.99366	14
47	9.23025	73	9.23661	76	0.76339	9.99364	13
48	9.23098	73	9.23737	75	0.76263	9.99362	12
49	9.23171	73	9.23812	75	0.76188	9.99359	11
50	9.23244	73	9.23887	75	0.76113	9.99357	10
51	9.23317	73	9.23962	75	0.76038	9.99355	9
52	9.23390	72	9.24037	75	0.75963	9.99353	8
53	9.23462	73	9.24112	74	0.75888	9.99351	7
54	9.23535	72	9.24186	75	0.75814	9.99348	6
55	9.23607	72	9.24261	74	0.75739	9.99346	5
56	9.23679	73	9.24335	75	0.75665	9.99344	4
57	9.23752	71	9.24410	74	0.75590	9.99342	3
58	9.23823	72	9.24484	74	0.75516	9.99340	2
59	9.23895	72	9.24558	74	0.75442	9.99337	1
60	9.23967		9.24632		0.75368	9.99335	0
′	Cos	d.	Cotg	d.c.	Tang	Sin	′

″	P. P.											
	82	81	80	79	78	77	76	75	74	73	72	71
1	1	1	1	1	1	1	1	1	1	1	1	1
2	3	3	3	3	3	3	3	2	2	2	2	2
3	4	4	4	4	4	4	4	4	4	4	4	4
4	5	5	5	5	5	5	5	5	5	5	5	5
5	7	7	7	7	6	6	6	6	6	6	6	6
6	8	8	8	8	8	8	8	7	7	7	7	7
7	10	9	9	9	9	9	9	9	9	9	8	8
8	11	11	11	11	10	10	10	10	10	10	10	9
9	12	12	12	12	12	12	11	11	11	11	11	11
10	14	13	13	13	13	13	13	12	12	12	12	12
11	15	15	15	14	14	14	14	14	14	13	13	13
12	16	16	16	16	16	15	15	15	15	15	14	14
13	18	18	17	17	17	17	16	16	16	16	16	15
14	19	19	19	18	18	18	18	17	17	17	17	17
15	20	20	20	20	19	19	19	19	18	18	18	18
16	22	22	21	21	21	21	20	20	20	19	19	19
17	23	23	23	22	22	22	22	21	21	21	20	20
18	25	24	24	24	23	23	23	22	22	22	22	21
19	26	26	25	25	25	24	24	24	23	23	23	22
20	27	27	27	26	26	26	25	25	25	24	24	24
21	29	28	28	28	27	27	27	26	26	26	25	25
22	30	30	29	29	29	28	28	27	27	27	26	26
23	31	31	31	30	30	30	29	29	28	28	28	27
24	33	32	32	32	31	31	30	30	30	29	29	28
25	34	34	33	33	32	32	32	31	31	30	30	30
26	36	35	35	34	34	33	33	32	32	32	31	31
27	37	36	36	36	35	35	34	34	33	33	32	32
28	38	38	37	37	36	36	35	35	35	34	34	33
29	40	39	39	38	38	37	37	36	36	35	35	34
30	41	40	40	39	39	38	38	37	37	36	36	35
31	42	42	41	41	40	40	39	39	38	38	37	37
32	44	43	43	42	42	41	41	40	39	39	38	38
33	45	45	44	43	43	42	42	41	41	40	40	39
34	46	46	45	45	44	44	43	42	42	41	41	40
35	48	47	47	46	45	45	44	44	43	43	42	41
36	49	49	48	47	47	46	46	45	44	44	43	43
37	51	50	49	49	48	47	47	46	46	45	44	44
38	52	51	51	50	49	49	48	47	47	46	46	45
39	53	53	52	51	51	50	49	49	48	47	47	46
40	55	54	53	53	52	51	51	50	49	49	48	47
41	56	55	55	54	53	53	52	51	51	50	49	49
42	57	57	56	55	55	54	53	52	52	51	50	50
43	59	58	57	57	56	55	54	54	53	52	52	51
44	60	59	59	58	57	56	56	55	54	54	53	52
45	61	61	60	59	58	58	57	56	55	55	54	53
46	63	62	61	61	60	59	58	57	57	56	55	54
47	64	63	63	62	61	60	60	59	58	57	56	56
48	66	65	64	63	62	62	61	60	59	58	58	57
49	67	66	65	65	64	63	62	61	60	60	59	58
50	68	67	67	66	65	64	63	62	62	61	60	59
51	70	69	68	67	66	65	65	64	63	62	61	60
52	71	70	69	68	68	67	66	65	64	63	62	62
53	72	72	71	70	69	68	67	66	65	64	64	63
54	74	73	72	71	70	69	68	67	67	66	65	64
55	75	74	73	72	71	71	70	69	68	67	66	65
56	77	76	75	74	73	72	71	70	69	68	67	66
57	78	77	76	75	74	73	72	71	70	69	68	67
58	79	78	77	76	75	74	73	72	72	71	70	69
59	81	80	79	78	77	76	75	74	73	72	71	70
60	82	81	80	79	78	77	76	75	74	73	72	71
″	P. P.											

′	Sin	d.	Tang	d.c.	Cotg	Cos	′
0	9.23967		9.24632		0.75368	9.99335	60
		72		74			
1	9.24039		9.24706		0.75294	9.99333	59
		71		73			
2	9.24110		9.24779		0.75221	9.99331	58
		71		74			
3	9.24181		9.24853		0.75147	9.99328	57
		72		73			
4	9.24253		9.24926		0.75074	9.99326	56
		71		74			
5	9.24324		9.25000		0.75000	9.99324	55
		71		73			
6	9.24395		9.25073		0.74927	9.99322	54
		71		73			
7	9.24466		9.25146		0.74854	9.99319	53
		70		73			
8	9.24536		9.25219		0.74781	9.99317	52
		71		73			
9	9.24607		9.25292		0.74708	9.99315	51
		70		73			
10	9.24677		9.25365		0.74635	9.99313	50
		71		72			
11	9.24748		9.25437		0.74563	9.99310	49
		70		73			
12	9.24818		9.25510		0.74490	9.99308	48
		70		72			
13	9.24888		9.25582		0.74418	9.99306	47
		70		73			
14	9.24958		9 25655		0.74345	9.99304	46
		70		72			
15	9.25028		9.25727		0.74273	9.99301	45
		70		72			
16	9.25098		9.25799		0.74201	9.99299	44
		70		72			
17	9.25168		9.25871		0.74129	9.99297	43
		69		72			
18	9.25237		9.25943		0.74057	9.99294	42
		70		72			
19	9.25307		9.26015		0.73985	9.99292	41
		69		71			
20	9.25376		9.26086		0.73914	9.99290	40
		69		72			
21	9·25445		9.26158		0.73842	9.99288	39
		69		71			
22	9.25514		9.26229		0.73771	9.99285	38
		69		72			
23	9.25583		9.26301		0.73699	9.99283	37
		69		71			
24	9.25652		9.26372		0.73628	9.99281	36
		69		71			
25	9.25721		9.26443		0.73557	9.99278	35
		69		71			
26	9.25790		9.26514		0.73486	9.99276	34
		68		71			
27	9.25858		9.26585		0.73415	9.99274	33
		69		70			
28	9.25927		9.26655		0.73345	9.99271	32
		68		71			
29	9.25995		9.26726		0.73274	9.99269	31
		68		71			
30	9.26063		9.26797		0.73203	9.99267	30
		68		70			
31	9.26131		9.26867		0.73133	9.99264	29
		68		70			
32	9.26199		9.26937		0.73063	9.99262	28
		68		71			
33	9.26267		9.27008		0.72992	9.99260	27
		68		70			
34	9.26335		9.27078		0.72922	9.99257	26
		68		70			
35	9.26403		9.27148		0.72852	9.99255	25
		67		70			
36	9.26470		9.27218		0.72782	9.99252	24
		68		70			
37	9.26538		9.27288		0.72712	9.99250	23
		67		69			
38	9.26605		9.27357		0.72643	9.99248	22
		67		70			
39	9.26672		9.27427		0.72573	9.99245	21
		67		69			
40	9.26739		9.27496		0.72504	9.99243	20
		67		70			
41	9.26806		9.27566		0.72434	9.99241	19
		67		69			
42	9.26873		9.27635		0.72365	9.99238	18
		67		69			
43	9.26940		9.27704		0.72296	9.99236	17
		67		69			
44	9.27007		9.27773		0.72227	9.99233	16
		66		69			
45	9.27073		9.27842		0.72158	9.99231	15
		67		69			
46	9.27140		9.27911		0.72089	9.99229	14
		66		69			
47	9.27206		9.27980		0.72020	9.99226	13
		67		69			
48	9.27273		9.28049		0.71951	9.99224	12
		66		68			
49	9.27339		9.28117		0.71883	9.99221	11
		66		69			
50	9.27405		9.28186		0.71814	9.99219	10
		66		68			
51	9.27471		9.28254		0.71746	9.99217	9
		66		69			
52	9.27537		9.28323		0.71677	9.99214	8
		65		68			
53	9.27602		9.28391		0.71609	9.99212	7
		66		68			
54	9.27668		9.28459		0.71541	9.99209	6
		66		68			
55	9.27734		9.28527		0.71473	9.99207	5
		65		68			
56	9.27799		9.28595		0.71405	9.99204	4
		65		67			
57	9.27864		9.28662		0.71338	9.99202	3
		66		68			
58	9.27930		9.28730		0.71270	9.99200	2
		65		68			
59	9.27995		9 28798		0.71202	9.99197	1
		65		67			
60	9.28060		9.28865		0.71135	9.99195	0
′	Cos	d	Cotg	d.c.	Tang	Sin	′

″	P. P.									
	74	73	72	71	70	69	68	67	66	65
1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2
3	4	4	4	4	3	3	3	3	3	3
4	5	5	5	5	5	5	5	4	4	4
5	6	6	6	6	6	6	6	6	5	5
6	7	7	7	7	7	7	7	7	7	6
7	9	9	8	8	8	8	8	8	8	8
8	10	10	10	9	9	9	9	9	9	9
9	11	11	11	11	10	10	10	10	10	10
10	12	12	12	12	12	11	11	11	11	11
11	14	13	13	13	13	13	12	12	12	12
12	15	15	14	14	14	14	14	13	13	13
13	16	16	16	15	15	15	15	15	14	14
14	17	17	17	17	16	16	16	16	15	15
15	18	18	18	18	17	17	17	17	16	16
16	20	19	19	19	19	18	18	18	18	17
17	21	21	20	20	20	20	19	19	19	18
18	22	22	22	21	21	21	20	20	20	19
19	23	23	23	22	22	22	22	21	21	21
20	25	24	24	24	23	23	23	22	22	22
21	26	26	25	25	24	24	24	23	23	23
22	27	27	26	26	26	25	25	25	24	24
23	28	28	28	27	27	26	26	26	25	25
24	30	29	29	28	28	28	27	27	26	26
25	31	30	30	30	29	29	28	28	27	27
26	32	32	31	31	30	30	29	29	29	28
27	33	33	32	32	31	31	31	30	30	29
28	35	34	34	33	33	32	32	31	31	30
29	36	35	35	34	34	33	33	32	32	31
30	37	36	36	35	35	34	34	33	33	32
31	38	38	37	37	36	36	35	35	34	34
32	39	39	38	38	37	37	36	36	35	35
33	41	40	40	39	38	38	37	37	36	36
34	42	41	41	40	40	39	39	38	37	37
35	43	43	42	41	41	40	40	39	38	38
36	44	44	43	43	42	41	41	40	40	39
37	46	45	44	44	43	43	42	41	41	40
38	47	46	46	45	44	44	43	42	42	41
39	48	47	47	46	45	45	44	44	43	42
40	49	49	48	47	47	46	45	45	44	43
41	51	50	49	49	48	47	46	46	45	44
42	52	51	50	50	49	48	48	47	46	45
43	53	52	52	51	50	49	49	48	47	47
44	54	54	53	52	51	51	50	49	48	48
45	55	55	54	53	52	52	51	50	49	49
46	57	56	55	54	54	53	52	51	51	50
47	58	57	56	56	55	54	53	52	52	51
48	59	58	58	57	56	55	54	54	53	52
49	60	60	59	58	57	56	56	55	54	53
50	62	61	60	59	58	57	57	56	55	54
51	63	62	61	60	59	59	58	57	56	55
52	64	63	62	62	61	60	59	58	57	56
53	65	64	64	63	62	61	60	59	58	57
54	67	66	65	64	63	62	61	60	59	58
55	68	67	66	65	64	63	62	61	60	60
56	69	68	67	66	65	64	63	63	62	61
57	70	69	68	67	66	66	65	64	63	62
58	72	71	70	69	68	67	66	65	64	63
59	73	72	71	70	69	68	67	66	65	64
60	74	73	72	71	70	69	68	67	66	65
″	P. P.									

′	Sin	d.	Tang	d.c.	Cotg	Cos	′
0	9.28060		9.28865	68	0.71135	9.99195	60
1	9.28125	65	9.28933	67	0.71067	9.99192	59
2	9.28190	65	9.29000	67	0.71000	9.99190	58
3	9.28254	64	9.29067	67	0.70933	9.99187	57
4	9.28319	65	9.29134	67	0.70866	9.99185	56
5	9.28384	65	9.29201	67	0.70799	9.99182	55
6	9.28448	64	9.29268	67	0.70732	9.99180	54
7	9.28512	64	9.29335	67	0.70665	9.99177	53
8	9.28577	65	9.29402	66	0.70598	9.99175	52
9	9.28641	64	9.29468	67	0.70532	9.99172	51
10	9.28705	64	9.29535	66	0.70465	9.99170	50
11	9.28769	64	9.29601	67	0.70399	9.99167	49
12	9.28833	64	9.29668	66	0.70332	9.99165	48
13	9.28896	63	9.29734	66	0 70266	9.99162	47
14	9.28960	64	9.29800	66	0.70200	9.99160	46
15	9.29024	64	9.29866	66	0.70134	9.99157	45
16	9.29087	63	9.29932	66	0.70068	9.99155	44
17	9.29150	63	9.29998	66	0.70002	9.99152	43
18	9.29214	64	9.30064	66	0.69936	9.99150	42
19	9.29277	63	9.30130	65	0.69870	9.99147	41
20	9.29340	63	9.30195	66	0.69805	9.99145	40
21	9.29403	63	9.30261	65	0.69739	9.99142	39
22	9.29466	63	9.30326	65	0.69674	9.99140	38
23	9.29529	63	9.30391	66	0.69609	9.99137	37
24	9.29591	62	9.30457	65	0.69543	9.99135	36
25	9.29654	63	9.30522	65	0.69478	9.99132	35
26	9.29716	62	9.30587	65	0.69413	9.99130	34
27	9.29779	63	9.30652	65	0.69348	9.99127	33
28	9.29841	62	9.30717	65	0.69283	9.99124	32
29	9.29903	62	9.30782	64	0.69218	9.99122	31
30	9.29966	63	9.30846	65	0.69154	9.99119	30
31	9.30028	62	9.30911	64	0.69089	9.99117	29
32	9.30090	62	9.30975	65	0.69025	9.99114	28
33	9.30151	61	9.31040	64	0.68960	9.99112	27
34	9.30213	62	9.31104	64	0.68896	9.99109	26
35	9.30275	62	9.31168	65	0.68832	9.99106	25
36	9.30336	61	9.31233	64	0.68767	9.99104	24
37	9.30398	62	9.31297	64	0.68703	9.99101	23
38	9.30459	61	9.31361	64	0.68639	9.99099	22
39	9.30521	62	9.31425	64	0.68575	9.99096	21
40	9.30582	61	9.31489	63	0.68511	9.99093	20
41	9.30643	61	9.31552	64	0.68448	9.99091	19
42	9.30704	61	9.31616	63	0.68384	9.99088	18
43	9.30765	61	9.31679	64	0.68321	9.99086	17
44	9.30826	61	9.31743	63	0.68257	9.99083	16
45	9.30887	61	9.31806	64	0.68194	9.99080	15
46	9.30947	60	9.31870	63	0.68130	9.99078	14
47	9.31008	61	9.31933	63	0.68067	9.99075	13
48	9.31068	60	9.31996	63	0.68004	9.99072	12
49	9.31129	61	9.32059	63	0.67941	9.99070	11
50	9.31189	60	9.32122	63	0.67878	9.99067	10
51	9.31250	61	9.32185	63	0.67815	9.99064	9
52	9.31310	60	9.32248	63	0.67752	9.99062	8
53	9.31370	60	9.32311	62	0.67689	9.99059	7
54	9.31430	60	9.32373	63	0.67627	9.99056	6
55	9.31490	60	9.32436	62	0.67564	9.99054	5
56	9.31549	59	9.32498	63	0 67502	9.99051	4
57	9.31609	60	9.32561	62	0.67439	9.99048	3
58	9.31669	60	9.32623	62	0.67377	9.99046	2
59	9.31728	59	9.32685	62	0.67315	9.99043	1
60	9.31788	60	9.32747		0.67253	9.99040	0
′	Cos	d.	Cotg	d.c.	Tang	Sin	′

′	P. P.									
	68	67	66	65	64	63	62	61	60	59
1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3
4	5	4	4	4	4	4	4	4	4	4
5	6	6	5	5	5	5	5	5	5	5
6	7	7	7	6	6	6	6	6	6	6
7	8	8	8	8	7	7	7	7	7	7
8	9	9	9	9	9	8	8	8	8	8
9	10	10	10	10	10	9	9	9	9	9
10	11	11	11	11	11	10	10	10	10	10
11	12	12	12	12	12	12	11	11	11	11
12	14	13	13	13	13	13	12	12	12	12
13	15	15	14	14	14	14	13	13	13	13
14	16	16	15	15	15	15	14	14	14	14
15	17	17	16	16	16	16	15	15	15	15
16	18	18	18	17	17	17	17	16	16	16
17	19	19	19	18	18	18	18	17	17	17
18	20	20	20	19	19	19	19	18	18	18
19	22	21	21	21	20	20	20	19	19	19
20	23	22	22	22	21	21	21	20	20	20
21	24	23	23	23	22	22	22	21	21	21
22	25	25	24	24	23	23	23	22	22	22
23	26	26	25	25	25	24	24	23	23	23
24	27	27	26	26	26	25	25	24	24	24
25	28	28	27	27	27	26	26	25	25	25
26	29	29	29	28	28	27	27	26	26	26
27	31	30	30	29	29	28	28	27	27	27
28	32	31	31	30	30	29	29	28	28	28
29	33	32	32	31	31	30	30	29	29	29
30	34	33	33	32	32	31	31	30	30	29
31	35	35	34	34	33	33	32	32	31	30
32	36	36	35	35	34	34	33	33	32	31
33	37	37	36	36	35	35	34	34	33	32
34	39	38	37	37	36	36	35	35	34	33
35	40	39	38	38	37	37	36	36	35	34
36	41	40	40	39	38	38	37	37	36	35
37	42	41	41	40	39	39	38	38	37	36
38	43	42	42	41	41	40	39	39	38	37
39	44	44	43	42	42	41	40	40	39	38
40	45	45	44	43	43	42	41	41	40	39
41	46	46	45	44	44	43	42	42	41	40
42	48	47	46	45	45	44	43	43	42	41
43	49	48	47	47	46	45	44	44	43	42
44	50	49	48	48	47	46	45	45	44	43
45	51	50	49	49	48	47	46	46	45	44
46	52	51	51	50	49	48	48	47	46	45
47	53	52	52	51	50	49	49	48	47	46
48	54	54	53	52	51	50	50	49	48	47
49	56	55	54	53	52	51	51	50	49	48
50	57	56	55	54	53	52	52	51	50	49
51	58	57	56	55	54	54	53	52	51	50
52	59	58	57	56	55	55	54	53	52	51
53	60	59	58	57	57	56	55	54	53	52
54	61	60	59	58	58	57	56	55	54	53
55	62	61	60	60	59	58	57	56	55	54
56	63	63	62	61	60	59	58	57	56	55
57	65	64	63	62	61	60	59	58	57	56
58	66	65	64	63	62	61	60	59	58	57
59	67	66	65	64	63	62	61	60	59	58
60	68	67	66	65	64	63	62	61	60	59
′	P. P.									

′	Sin	d.	Tang	d.c.	Cotg	Cos	′
0	9.31788	59	9.32747	63	0.67253	9.99040	60
1	9.31847	60	9.32810	62	0.67190	9.99038	59
2	9.31907	59	9.32872	61	0.67128	9.99035	58
3	9.31966	59	9.32933	62	0.67067	9.99032	57
4	9.32025	59	9.32995	62	0.67005	9.99030	56
5	9.32084	59	9.33057	62	0.66943	9.99027	55
6	9.32143	59	9.33119	61	0.66881	9.99024	54
7	9.32202	59	9.33180	62	0.66820	9.99022	53
8	9.32261	58	9.33242	61	0.66758	9.99019	52
9	9.32319	59	9.33303	62	0.66697	9.99016	51
10	9.32378	59	9.33365	61	0.66635	9.99013	50
11	9.32437	58	9.33426	61	0.66574	9.99011	49
12	9.32495	58	9.33487	61	0.66513	9.99008	48
13	9.32553	59	9.33548	61	0.66452	9.99005	47
14	9.32612	58	9.33609	61	0.66391	9.99002	46
15	9.32670	58	9.33670	61	0.66330	9.99000	45
16	9.32728	58	9.33731	61	0.66269	9.98997	44
17	9.32786	58	9.33792	61	0.66208	9.98994	43
18	9 32844	58	9 33853	60	0.66147	9.98991	42
19	9.32902	58	9.33913	61	0.66087	9.98989	41
20	9.32960	58	9.33974	60	0.66026	9.98986	40
21	9.33018	57	9.34034	61	0.65966	9.98983	39
22	9.33075	58	9.34095	60	0.65905	9.98980	38
23	9.33133	57	9.34155	60	0.65845	9.98978	37
24	9.33190	58	9.34215	61	0.65785	9.98975	36
25	9.33248	57	9.34276	60	0.65724	9.98972	35
26	9.33305	57	9.34336	60	0.65664	9.98969	34
27	9.33362	58	9.34396	60	0.65604	9.98967	33
28	9.33420	57	9.34456	60	0.65544	9.98964	32
29	9.33477	57	9.34516	60	0.65484	9.98961	31
30	9.33534	57	9.34576	59	0.65424	9.98958	30
31	9.33591	56	9.34635	60	0.65365	9.98955	29
32	9.33647	57	9.34695	60	0.65305	9.98953	28
33	9.33704	57	9.34755	59	0.65245	9 98950	27
34	9.33761	57	9.34814	60	0.65186	9.98947	26
35	9.33818	56	9.34874	59	0.65126	9 98944	25
36	9.33874	57	9.34933	59	0.65067	9.98941	24
37	9.33931	56	9.34992	59	0.65008	9.98938	23
38	9.33987	56	9.35051	60	0.64949	9.98936	22
39	9.34043	57	9.35111	59	0.64889	9.98933	21
40	9.34100	56	9.35170	59	0.64830	9.98930	20
41	9.34156	56	9.35229	59	0.64771	9.98927	19
42	9.34212	56	9.35288	59	0.64712	9.98924	18
43	9.34268	56	9.35347	58	0.64653	9.98921	17
44	9.34324	56	9.35405	59	0.64595	9.98919	16
45	9.34380	56	9.35464	59	0.64536	9.98916	15
46	9.34436	55	9.35523	58	0.64477	9.98913	14
47	9.34491	56	9.35581	59	0.64419	9.98910	13
48	9.34547	55	9.35640	58	0.64360	9.98907	12
49	9.34602	56	9.35698	59	0.64302	9.98904	11
50	9.34658	55	9.35757	58	0.64243	9.98901	10
51	9.34713	56	9.35815	58	0.64185	9.98898	9
52	9.34769	55	9.35873	58	0.64127	9.98896	8
53	9.34824	55	9.35931	58	0.64069	9.98893	7
54	9.34879	55	9.35989	58	0.64011	9.98890	6
55	9.34934	55	9.36047	58	0.63953	9.98887	5
56	9.34989	55	9.36105	58	0.63895	9.98884	4
57	9.35044	55	9.36163	58	0.63837	9.98881	3
58	9.35099	55	9.36221	58	0.63779	9.98878	2
59	9.35154	55	9.36279	57	0.63721	9.98875	1
60	9.35209		9.36336		0.63664	9.98872	0
′	Cos	d.	Cotg	d.c.	Tang	Sin	′

″	P. P.								
	63	62	61	60	59	58	57	56	55
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	5
7	7	7	7	7	7	7	7	7	6
8	8	8	8	8	8	8	8	7	7
9	9	9	9	9	9	9	9	8	8
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12	13	12	12	12	12	12	11	11	11
13	14	13	13	13	13	13	12	12	12
14	15	14	14	14	14	14	13	13	13
15	16	15	15	15	15	14	14	14	14
16	17	17	16	16	16	15	15	15	15
17	18	18	17	17	17	16	16	16	16
18	19	19	18	18	18	17	17	17	16
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20	21	21	20	20	20	19	19	19	18
21	22	22	21	21	21	20	20	20	19
22	23	23	22	22	22	21	21	21	20
23	24	24	23	23	23	22	22	21	21
24	25	25	24	24	24	23	23	22	22
25	26	26	25	25	25	24	24	23	23
26	27	27	26	26	26	25	25	24	24
27	28	28	27	27	27	26	26	25	25
28	29	29	28	28	28	27	27	26	26
29	30	30	29	29	29	28	28	27	27
30	31	31	30	30	29	29	28	28	27
31	33	32	32	31	30	30	29	29	28
32	34	33	33	32	31	31	30	30	29
33	35	34	34	33	32	32	31	31	30
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35	37	36	36	35	34	34	33	33	32
36	38	37	37	36	35	35	34	34	33
37	39	38	38	37	36	36	35	35	34
38	40	39	39	38	37	37	36	35	35
39	41	40	40	39	38	38	37	36	36
40	42	41	41	40	39	39	38	37	37
41	43	42	42	41	40	40	39	38	38
42	44	43	43	42	41	41	40	39	38
43	45	44	44	43	42	42	41	40	39
44	46	45	45	44	43	43	42	41	40
45	47	46	46	45	44	43	43	42	41
46	48	48	47	46	45	44	44	43	42
47	49	49	48	47	46	45	45	44	43
48	50	50	49	48	47	46	46	45	44
49	51	51	50	49	48	47	47	46	45
50	52	52	51	50	49	48	47	47	46
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53	56	55	54	53	52	51	50	49	49
54	57	56	55	54	53	52	51	50	49
55	58	57	56	55	54	53	52	51	50
56	59	58	57	56	55	54	53	52	51
57	60	59	58	57	56	55	54	53	52
58	61	60	59	58	57	56	55	54	53
59	62	61	60	59	58	57	56	55	54
60	63	62	61	60	59	58	57	56	55
″	P. P.								

′	Sin	d.	Tang	d.c.	Cotg	Cos	′
0	9.35209	54	9.36336	58	0.63664	9.98872	60
1	9.35263	55	9.36394	58	0.63606	9.98869	59
2	9.35318	55	9.36452	57	0.63548	9.98867	58
3	9.35373	54	9.36509	57	0.63491	9.98864	57
4	9.35427	54	9.36566	58	0.63434	9.98861	56
5	9.35481	55	9.36624	57	0.63376	9.98858	55
6	9.35536	54	9.36681	57	0.63319	9.98855	54
7	9.35590	54	9.36738	57	0.63262	9.98852	53
8	9.35644	54	9.36795	57	0.63205	9.98849	52
9	9.35698	54	9.36852	57	0.63148	9.98846	51
10	9.35752	54	9.36909	57	0.63091	9.98843	50
11	9.35806	54	9.36966	57	0.63034	9.98840	49
12	9.35860	54	9.37023	57	0.62977	9.98837	48
13	9.35914	54	9.37080	57	0.62920	9.98834	47
14	9.35968	54	9.37137	56	0.62863	9.98831	46
15	9.36022	53	9.37193	57	0.62807	9.98828	45
16	9.36075	54	9.37250	56	0.62750	9.98825	44
17	9.36129	53	9.37306	57	0.62694	9.98822	43
18	9.36182	54	9.37363	56	0.62637	9.98819	42
19	9.36236	53	9.37419	57	0.62581	9.98816	41
20	9.36289	53	9.37476	56	0.62524	9.98813	40
21	9.36342	53	9.37532	56	0.62468	9.98810	39
22	9.36395	54	9.37588	56	0.62412	9.98807	38
23	9.36449	53	9.37644	56	0.62356	9.98804	37
24	9.36502	53	9.37700	56	0.62300	9.98801	36
25	9.36555	53	9.37756	56	0.62244	9.98798	35
26	9.36608	52	9.37812	56	0.62188	9.98795	34
27	9.36660	53	9.37868	56	0.62132	9.98792	33
28	9.36713	53	9.37924	56	0.62076	9.98789	32
29	9.36766	53	9.37980	55	0.62020	9.98786	31
30	9.36819	52	9.38035	56	0.61965	9.98783	30
31	9.36871	53	9.38091	56	0.61909	9.98780	29
32	9.36924	52	9.38147	55	0.61853	9.98777	28
33	9.36976	52	9.38202	55	0.61798	9.98774	27
34	9.37028	53	9.38257	56	0.61743	9.98771	26
35	9.37081	52	9.38313	55	0.61687	9.98768	25
36	9.37133	52	9.38368	55	0.61632	9.98765	24
37	9.37185	52	9.38423	56	0.61577	9.98762	23
38	9.37237	52	9.38479	55	0.61521	9.98759	22
39	9.37289	52	9.38534	55	0.61466	9.98756	21
40	9.37341	52	9.38589	55	0.61411	9.98753	20
41	9.37393	52	9.38644	55	0.61356	9.98750	19
42	9.37445	52	9.38699	55	0.61301	9.98746	18
43	9.37497	52	9.38754	54	0.61246	9.98743	17
44	9.37549	51	9.38808	55	0.61192	9.98740	16
45	9.37600	52	9.38863	55	0.61137	9.98737	15
46	9.37652	51	9.38918	54	0.61082	9.98734	14
47	9.37703	52	9.38972	55	0.61028	9.98731	13
48	9.37755	51	9.39027	55	0.60973	9.98728	12
49	9.37806	52	9.39082	54	0.60918	9.98725	11
50	9.37858	51	9.39136	54	0.60864	9.98722	10
51	9.37909	51	9.39190	55	0.60810	9.98719	9
52	9.37960	51	9.39245	54	0.60755	9.98715	8
53	9.38011	51	9.39299	54	0.60701	9.98712	7
54	9.38062	51	9.39353	54	0.60647	9.98709	6
55	9.38113	51	9.39407	54	0.60593	9.98706	5
56	9.38164	51	9.39461	54	0.60539	9.98703	4
57	9.38215	51	9.39515	54	0.60485	9.98700	3
58	9.38266	51	9.39569	54	0.60431	9.98697	2
59	9.38317	51	9.39623	54	0.60377	9.98694	1
60	9.38368		9.39677		0.60323	9.98690	0
′	Cos	d.	Colg	d.c.	Tang	Sin	′

″	P. P.							
	58	57	56	55	54	53	52	51
1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2
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8	8	8	7	7	7	7	7	7
9	9	9	8	8	8	8	8	8
10	10	9	9	9	9	9	9	8
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21	20	20	20	19	19	19	18	18
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23	22	22	21	21	21	20	20	20
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25	24	24	23	23	22	22	22	21
26	25	25	24	24	23	23	23	22
27	26	26	25	25	24	24	23	23
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30	29	28	28	27	27	26	26	25
31	30	29	29	28	28	27	27	26
32	31	30	30	29	29	28	28	27
33	32	31	31	30	30	29	29	28
34	33	32	32	31	31	30	29	29
35	34	33	33	32	31	31	30	30
36	35	34	34	33	32	32	31	31
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41	40	39	38	38	37	36	36	35
42	41	40	39	38	38	37	36	36
43	42	41	40	39	39	38	37	37
44	43	42	41	40	40	39	38	37
45	43	43	42	41	40	40	39	38
46	44	44	43	42	41	41	40	39
47	45	45	44	43	42	42	41	40
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55	53	52	51	50	49	49	48	47
56	54	53	52	51	50	49	49	48
57	55	54	53	52	51	50	49	48
58	56	55	54	53	52	51	50	49
59	57	56	55	54	53	52	51	50
60	58	57	56	55	54	53	52	51
″	P. P.							

′	Sin	d.	Tang	d.c.	Cotg	Cos	′	″	P. P.							
									54	53	52	51	50	49	48	47
0	9.38368	50	9.39677	54	0.60323	9.98690	60									
1	9.38418	51	9.39731	54	0.60269	9.98687	59	1	1	1	1	1	1	1	1	1
2	9.38469	50	9.39785	53	0.60215	9.98684	58	2	2	2	2	2	2	2	2	2
3	9.38519	51	9.39838	54	0.60162	9.98681	57	3	3	3	3	3	2	2	2	2
4	9.38570	50	9.39892	53	0.60108	9.98678	56	4	4	4	3	3	3	3	3	3
5	9.38620	50	9.39945	54	0.60055	9.98675	55	5	4	4	4	4	4	4	4	4
6	9.38670	51	9.39999	53	0.60001	9.98671	54	6	5	5	5	5	5	5	5	5
7	9.38721	50	9.40052	54	0.59948	9.98668	53	7	6	6	6	6	6	6	6	5
8	9.38771	50	9.40106	53	0.59894	9.98665	52	8	7	7	7	7	7	7	6	6
9	9.38821	50	9.40159	53	0.59841	9.98662	51	9	8	8	8	8	7	7	7	7
10	9.38871	50	9.40212	54	0.59788	9.98659	50	10	9	9	9	8	8	8	8	8
11	9.38921	50	9.40266	53	0.59734	9.98656	49	11	10	10	10	9	9	9	9	9
12	9.38971	50	9.40319	53	0.59681	9.98652	48	12	11	11	10	10	10	10	10	9
13	9.39021	50	9.40372	53	0.59628	9.98649	47	13	12	11	11	11	11	11	10	10
14	9.39071	50	9.40425	53	0.5957.	9.98646	46	14	13	12	12	12	12	11	11	11
15	9.39121	49	9.40478	53	0.59522	9.98643	45	15	13	13	13	13	12	12	12	12
16	9.39170	50	9.40531	53	0.59469	9.98640	44	16	14	14	14	14	13	13	13	13
17	9.39220	50	9.40584	52	0.59416	9.98636	43	17	15	15	15	14	14	14	14	13
18	9.39270	49	9.40636	53	0.59364	9.98633	42	18	16	16	16	15	15	15	14	14
19	9.39319	50	9.40689	53	0.59311	9.98630	41	19	17	17	16	16	16	16	15	15
20	9.39369	49	9.40742	53	0.59258	9.98627	40	20	18	18	17	17	17	16	16	16
21	9.39418	49	9.40795	52	0.59205	9.98623	39	21	19	19	18	18	17	17	17	16
22	9.39467	50	9.40847	53	0.59153	9.98620	38	22	20	19	19	19	18	18	18	17
23	9.39517	49	9.40900	52	0.59100	9.98617	37	23	21	20	20	20	19	19	18	18
24	9.39566	49	9.40952	53	0.59048	9.98614	36	24	22	21	21	20	20	20	19	19
25	9.39615	49	9.41005	52	0.58995	9.98610	35	25	22	22	22	21	21	20	20	20
26	9.39664	49	9.41057	52	0.58943	9.98607	34	26	23	23	23	22	22	21	21	20
27	9.39713	49	9.41109	52	0.58891	9.98604	33	27	24	24	23	23	22	22	22	21
28	9.39762	49	9.41161	53	0.58839	9.98601	32	28	25	25	24	24	23	23	22	22
29	9.39811	49	9.41214	52	0.58786	9.98597	31	29	26	26	25	25	24	24	23	23
30	9.39860	49	9.41266	52	0.58734	9.98594	30	30	27	26	26	25	25	24	24	23
31	9.39909	49	9.41318	52	0.58682	9.98591	29	31	28	27	27	26	26	25	25	24
32	9.39958	48	9.41370	52	0.58630	9.98588	28	32	29	28	28	27	27	26	26	25
33	9.40006	49	9.41422	52	0.58578	9.98584	27	33	30	29	29	28	27	27	26	26
34	9.40055	48	9.41474	52	0.58526	9.98581	26	34	31	30	29	29	28	28	27	27
35	9.40103	49	9.41526	52	0.58474	9.98578	25	35	31	31	30	30	29	29	28	27
36	9.40152	48	9.41578	51	0.58422	9.98574	24	36	32	32	31	31	30	29	29	28
37	9.40200	49	9.41629	52	0.58371	9 98571	23	37	33	33	32	31	31	30	30	29
38	9 40249	48	9.41681	52	0.58319	9.98568	22	38	34	34	33	32	32	31	30	30
39	9.40297	49	9.41733	51	0.58267	9.98565	21	39	35	34	34	33	32	32	31	31
40	9.40346	48	9.41784	52	0.58216	9.98561	20	40	36	35	35	34	33	33	32	31
41	9.40394	48	9.41836	51	0.58164	9.98558	19	41	37	36	36	35	34	33	33	32
42	9.40442	48	9.41887	52	0.58113	9 98555	18	42	38	37	36	36	35	34	34	33
43	9.40490	48	9.41939	51	0.58061	9.98551	17	43	39	38	37	37	36	35	34	34
44	9.40538	48	9.41990	51	0.58010	9.98548	16	44	40	39	38	37	37	36	35	34
45	9.40586	48	9.42041	52	0.57959	9 98545	15	45	40	40	39	38	37	37	36	35
46	9.40634	48	9.42093	51	0.57907	9.98541	14	46	41	41	40	39	38	38	37	36
47	9.40682	48	9.42144	51	0.57856	9.98538	13	47	42	42	41	40	39	38	38	37
48	9.40730	48	9.42195	51	0.57805	9.98535	12	48	43	42	42	41	40	39	38	38
49	9.40778	47	9.42246	51	0.57754	9.98531	11	49	44	43	42	42	41	40	39	38
50	9.40825	48	9.42297	51	0.57703	9.98528	10	50	45	44	43	42	42	41	40	39
51	9.40873	48	9.42348	51	0.57652	9.98525	9	51	46	45	44	43	42	42	41	40
52	9 40921	47	9.42399	51	0 57601	9.98521	8	52	47	46	45	44	43	42	42	41
53	9.40968	48	9.42450	51	0.57550	9.98518	7	53	48	47	46	45	44	43	42	42
54	9.41016	47	9.42501	51	0.57499	9.98515	6	54	49	48	47	46	45	44	43	42
55	9.41063	48	9.42552	51	0.57448	9.98511	5	55	49	49	48	47	46	45	44	43
56	9.41111	47	9.42603	50	0.57397	9.98508	4	56	50	49	49	48	47	46	45	44
57	9.41158	47	9.42653	51	0.57347	9.98505	3	57	51	50	49	48	47	47	46	45
58	9.41205	47	9.42704	51	0.57296	9.98501	2	58	52	51	50	49	48	47	46	45
59	9.41252	48	9.42755	50	0.57245	9.98498	1	59	53	52	51	50	49	48	47	46
60	9.41300		9.42805		0.57195	9.98494	0	60	54	53	52	51	50	49	48	47
′	Cos	d.	Cotg	d.c.	Tang	Sin	′	″	P. P.							

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.									
										51	50	49	48	47	46	45	44	1	3
0	9.41300		9.42805		0.57195	9.98494		60											
		47		51			3												
1	9.41347		9.42856		0.57144	9.98491		59	1	1	1	1	1	1	1	1	1	0	0
		47		50			3												
2	9.41394		9.42906		0.57094	9.98488		58	2	2	2	2	2	2	2	1	1	0	0
		47		51			4												
3	9.41441		9.42957		0.57043	9.98484		57	3	3	2	2	2	2	2	2	2	0	0
		47		50			3												
4	9.41488		9.43007		0.56993	9.98481		56	4	3	3	3	3	3	3	3	3	0	0
		47		50			4												
5	9.41535		9.43057		0.56943	9.98477		55	5	4	4	4	4	4	4	4	4	0	0
		47		51			3												
6	9.41582		9.43108		0.56892	9.98474		54	6	5	5	5	5	5	5	4	4	0	0
		46		50			3												
7	9.41628		9.43158		0.56842	9.98471		53	7	6	6	6	6	5	5	5	5	0	0
		47		50			4												
8	9.41675		9.43208		0.56792	9.98467		52	8	7	7	7	6	6	6	6	6	1	0
		47		50			3												
9	9.41722		9.43258		0.56742	9.98464		51	9	8	7	7	7	7	7	7	7	1	0
		46		50			4												
10	9.41768		9.43308		0.56692	9.98460		50	10	8	8	8	8	8	8	7	7	1	0
		47		50			3												
11	9.41815		9.43358		0.56642	9.98457		49	11	9	9	9	9	9	8	8	8	1	1
		46		50			4												
12	9.41861		9.43408		0.56592	9.98453		48	12	10	10	10	10	9	9	9	9	1	1
		47		50			3												
13	9.41908		9.43458		0.56542	9.98450		47	13	11	11	11	10	10	10	10	10	1	1
		46		50			3												
14	9.41954		9.43508		0.56492	9.98447		46	14	12	12	11	11	11	11	10	10	1	1
		47		50			4												
15	9.42001		9.43558		0.56442	9.98443		45	15	13	12	12	12	12	11	11	11	1	1
		46		49			3												
16	9.42047		9.43607		0.56393	9.98440		44	16	14	13	13	13	13	12	12	12	1	1
		46		50			4												
17	9.42093		9.43657		0.56343	9.98436		43	17	14	14	14	14	13	13	13	12	1	1
		47		50			3												
18	9.42140		9.43707		0.56293	9.98433		42	18	15	15	15	14	14	14	13	13	1	1
		46		49			4												
19	9.42186		9.43756		0.56244	9.98429		41	19	16	16	16	15	15	15	14	14	1	1
		46		50			3												
20	9.42232		9.43806		0.56194	9.98426		40	20	17	17	16	16	16	15	15	15	1	1
		46		49			4												
21	9.42278		9.43855		0.56145	9.98422		39	21	18	17	17	17	16	16	16	15	1	1
		46		50			3												
22	9.42324		9.43905		0.56095	9.98419		38	22	19	18	18	18	17	17	16	16	1	1
		46		49			4												
23	9.42370		9.43954		0.56046	9.98415		37	23	20	19	19	18	18	18	17	17	2	1
		46		50			3												
24	9.42416		9.44004		0.55996	9.98412		36	24	20	20	20	19	19	18	18	18	2	1
		45		49			3												
25	9.42461		9.44053		0.55947	9.98409		35	25	21	21	20	20	20	19	19	18	2	1
		46		49			4												
26	9.42507		9.44102		0.55898	9.98405		34	26	22	22	21	21	20	20	19	19	2	1
		46		49			3												
27	9.42553		9.44151		0.55849	9.98402		33	27	23	22	22	22	21	21	20	20	2	1
		46		50			4												
28	9.42599		9.44201		0.55799	9.98398		32	28	24	23	23	22	22	21	21	21	2	1
		45		49			3												
29	9.42644		9.44250		0.55750	9.98395		31	29	25	24	24	23	23	22	22	21	2	1
		46		49			4												
30	9.42690		9.44299		0.55701	9.98391		30	30	25	25	24	24	23	23	22	22	2	1
		45		49			3												
31	9.42735		9.44348		0.55652	9.98388		29	31	26	26	25	25	24	24	23	23	2	2
		46		49			4												
32	9.42781		9.44397		0.55603	9.98384		28	32	27	27	26	26	25	25	24	23	2	2
		45		49			3												
33	9.42826		9.44446		0.55554	9.98381		27	33	28	27	27	26	26	25	25	24	2	2
		46		49			4												
34	9.42872		9.44495		0.55505	9.98377		26	34	29	28	28	27	27	26	25	25	2	2
		45		49			4												
35	9.42917		9.44544		0.55456	9.98373		25	35	30	29	29	28	27	27	26	26	2	2
		45		48			3												
36	9.42962		9.44592		0.55408	9.98370		24	36	31	30	29	29	28	28	27	26	2	2
		46		49			4												
37	9.43008		9.44641		0.55359	9.98366		23	37	31	31	30	30	29	28	28	27	2	2
		45		49			3												
38	9.43053		9.44690		0.55310	9.98363		22	38	32	32	31	30	30	29	28	28	3	2
		45		48			4												
39	9.43098		9.44738		0.55262	9.98359		21	39	33	32	32	31	31	30	29	29	3	2
		45		49			3												
40	9.43143		9.44787		0.55213	9.98356		20	40	34	33	33	32	31	31	30	30	3	2
		45		49			4												
41	9.43188		9.44836		0.55164	9.98352		19	41	35	34	33	33	32	31	31	30	3	2
		45		48			3												
42	9.43233		9.44884		0.55116	9.98349		18	42	36	35	34	34	33	32	31	31	3	2
		45		49			4												
43	9.43278		9.44933		0.55067	9.98345		17	43	37	36	35	34	34	33	32	32	3	2
		45		48			3												
44	9.43323		9.44981		0.55019	9.98342		16	44	37	37	36	35	34	34	33	32	3	2
		44		48			4												
45	9.43367		9.45029		0.54971	9.98338		15	45	38	37	37	36	35	34	34	33	3	2
		45		49			4												
46	9.43412		9.45078		0.54922	9.98334		14	46	39	38	38	37	36	35	34	34	3	2
		45		48			3												
47	9.43457		9.45126		0.54874	9.98331		13	47	40	39	38	38	37	36	35	34	3	2
		45		48			4												
48	9.43502		9.45174		0.54826	9.98327		12	48	41	40	39	38	38	37	36	35	3	2
		44		48			3												
49	9.43546		9.45222		0.54778	9.98324		11	49	42	41	40	39	38	38	37	36	3	2
		45		49			4												
50	9.43591		9.45271		0.54729	9.98320		10	50	42	42	41	40	39	38	37	37	3	2
		44		48			3												
51	9.43635		9.45319		0.54681	9.98317		9	51	43	42	42	41	40	39	38	37	3	3
		45		48			4												
52	9.43680		9.45367		0.54633	9.98313		8	52	44	43	42	42	41	40	39	38	3	3
		44		48			4												
53	9.43724		9.45415		0.54585	9.98309		7	53	45	44	43	42	42	41	40	39	4	3
		45		48			3												
54	9.43769		9.45463		0.54537	9.98306		6	54	46	45	44	43	42	41	40	40	4	3
		44		48			4												
55	9.43813		9.45511		0.54489	9.98302		5	55	47	46	45	44	43	42	41	40	4	3
		44		48			3												
56	9.43857		9.45559		0.54441	9.98299		4	56	48	47	46	45	44	43	42	41	4	3
		44		47			4												
57	9.43901		9.45606		0.54394	9.98295		3	57	48	47	47	46	45	44	43	42	4	3
		45		48			4												
58	9.43946		9.45654		0.54346	9.98291		2	58	49	48	47	46	45	44	43	43	4	3
		44		48			3												
59	9.43990		9.45702		0.54298	9.98288		1	59	50	49	48	47	46	45	44	43	4	3
		44		48			4												
60	9.44034		9.45750		0.54250	9.98284		0	60	51	50	49	48	47	46	45	44	4	3
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.									

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.									
										48	47	46	45	44	43	42	41	4	3
0	9 44034	44	9.45750	47	0.54250	9.98284	3	60											
1	9 44078	44	9.45797	48	0.54203	9.98281	4	59	1	1	1	1	1	1	1	1	1	0	0
2	9.44122	44	9.45845	47	0.54155	9.98277	4	58	2	2	2	2	1	1	1	1	1	0	0
3	9.44166	44	9.45892	48	0.54108	9.98273	3	57	3	2	2	2	2	2	2	2	2	0	0
4	9.44210	43	9.45940	47	0.54060	9.98270	4	56	4	3	3	3	3	3	3	3	3	0	0
5	9.44253	44	9.45987	48	0.54013	9.98266	4	55	5	4	4	4	4	4	4	3	3	0	0
6	9.44297	44	9.46035	47	0.53965	9.98262	3	54	6	5	5	5	4	4	4	4	4	0	0
7	9.44341	44	9.46082	48	0.53918	9.98259	4	53	7	6	5	5	5	5	5	5	5	0	0
8	9 44385	43	9.46130	47	0.53870	9.98255	4	52	8	6	6	6	6	6	6	6	5	1	0
9	9.44428	44	9.46177	47	0.53823	9.98251	3	51	9	7	7	7	7	7	6	6	6	1	0
10	9.44472	44	9.46224	47	0.53776	9.98248	4	50	10	8	8	8	7	7	7	7	7	1	0
11	9 44516	43	9.46271	48	0.53729	9.98244	4	49	11	9	9	8	8	8	8	8	8	1	1
12	9.44559	43	9.46319	47	0.53681	9.98240	3	48	12	10	9	9	9	9	9	8	8	1	1
13	9.44602	44	9.46366	47	0.53634	9.98237	4	47	13	10	10	10	10	10	9	9	9	1	1
14	9.44646	43	9.46413	47	0.53587	9.98233	4	46	14	11	11	11	10	10	10	10	10	1	1
15	9.44689	44	9.46460	47	0.53540	9.98229	3	45	15	12	12	11	11	11	11	10	10	1	1
16	9.44733	43	9.46507	47	0.53493	9.98226	4	44	16	13	13	12	12	12	11	11	11	1	1
17	9.44776	43	9.46554	47	0.53446	9.98222	4	43	17	14	13	13	13	12	12	12	12	1	1
18	9 44819	43	9.46601	47	0.53399	9.98218	3	42	18	14	14	14	13	13	13	13	12	1	1
19	9.44862	43	9.46648	46	0.53352	9.98215	4	41	19	15	15	15	14	14	14	13	13	1	1
20	9.44905	43	9.46694	47	0.53306	9.98211	4	40	20	16	16	15	15	15	14	14	14	1	1
21	9.44948	44	9.46741	47	0.53259	9.98207	3	39	21	17	16	16	16	15	15	15	14	1	1
22	9.44992	43	9.46788	47	0.53212	9.98204	4	38	22	18	17	17	16	16	16	15	15	1	1
23	9.45035	42	9.46835	46	0.53165	9.98200	4	37	23	18	18	18	17	17	16	16	16	2	1
24	9.45077	43	9.46881	47	0.53119	9.98196	4	36	24	19	19	18	18	18	17	17	16	2	1
25	9.45120	43	9.46928	47	0.53072	9.98192	3	35	25	20	20	19	19	18	18	17	17	2	1
26	9.45163	43	9.46975	46	0.53025	9.98189	4	34	26	21	20	20	19	19	19	18	18	2	1
27	9.45206	23	9.47021	47	0.52979	9.98185	4	33	27	22	21	21	20	20	19	19	18	2	1
28	9.45249	43	9.47068	46	0.52932	9.98181	4	32	28	22	22	21	21	21	20	20	19	2	1
29	9.45292	42	9.47114	46	0.52886	9.98177	3	31	29	23	23	22	22	21	21	20	20	2	1
30	9.45334	43	9.47160	47	0.52840	9.98174	4	30	30	24	23	23	22	22	21	21	20	2	1
31	9 45377	42	9.47207	46	0.52793	9.98170	4	29	31	25	24	24	23	23	22	22	21	2	2
32	9.45419	43	9.47253	46	0.52747	9.98166	4	28	32	26	25	25	24	23	23	22	22	2	2
33	9.45462	42	9.47299	47	0.52701	9.98162	3	27	33	26	26	25	25	24	24	23	23	2	2
34	9.45504	43	9.47346	46	0.52654	9.98159	4	26	34	27	27	26	25	25	24	24	23	2	2
35	9.45547	42	9.47392	46	0.52608	9.98155	4	25	35	28	27	27	26	26	25	24	24	2	2
36	9 45589	43	9.47438	46	0.52562	9.98151	4	24	36	29	28	28	27	26	26	25	25	2	2
37	9.45632	42	9.47484	46	0.52516	9.98147	3	23	37	30	29	28	28	27	27	26	25	2	2
38	9 45674	42	9.47530	46	0.52470	9.98144	4	22	38	30	30	29	28	28	27	27	26	3	2
39	9.45716	42	9.47576	46	0.52424	9.98140	4	21	39	31	31	30	29	29	28	27	27	3	2
40	9.45758	43	9.47622	46	0.52378	9.98136	4	20	40	32	31	31	30	29	29	28	27	3	2
41	9.45801	42	9.47668	46	0.52332	9.98132	3	19	41	33	32	31	31	30	29	29	28	3	2
42	9.45843	42	9.47714	46	0.52286	9.98129	4	18	42	34	33	32	31	31	30	29	29	3	2
43	9.45885	42	9.47760	46	0.52240	9.98125	4	17	43	34	34	33	32	32	31	30	29	3	2
44	9.45927	42	9.47806	46	0.52194	9.98121	4	16	44	35	34	34	33	32	32	31	30	3	2
45	9.45969	42	9.47852	46	0.52148	9.98117	4	15	45	36	35	34	34	33	32	31	31	3	2
46	9.46011	42	9.47897	46	0.52103	9.98113	3	14	46	37	36	35	34	34	33	32	31	3	2
47	9.46053	42	9.47943	46	0.52057	9.98110	4	13	47	38	37	36	35	34	34	33	32	3	2
48	9.46095	41	9.47989	46	0.52011	9.98106	4	12	48	38	38	37	36	35	34	34	33	3	2
49	9.46136	42	9.48035	45	0.51965	9 98102	4	11	49	39	38	38	37	36	35	34	33	3	2
50	9.46178	42	9.48080	46	0.51920	9.98098	4	10	50	40	39	38	37	37	36	35	34	3	2
51	9.46220	42	9.48126	45	0.51874	9.98094	4	9	51	41	40	39	38	37	37	36	35	3	3
52	9.46262	41	9.48171	46	0.51829	9.98090	3	8	52	42	41	40	39	38	37	36	36	3	3
53	9.46303	42	9.48217	45	0.51783	9.98087	4	7	53	42	42	41	40	39	38	37	36	4	3
54	9.46345	41	9.48262	45	0.51738	9.98083	4	6	54	43	42	41	40	40	39	38	37	4	3
55	9.46386	42	9.48307	46	0.51693	9.98079	4	5	55	44	43	42	41	40	39	38	38	4	3
56	9.46428	41	9 48353	45	0.51647	9.98075	4	4	56	45	44	43	42	41	40	39	38	4	3
57	9.46169	42	9.48398	45	0.51602	9.98071	4	3	57	46	45	44	43	42	41	40	39	4	3
58	9 46511	41	9.48443	46	0.51557	9.98067	4	2	58	46	45	44	43	43	42	41	40	4	3
59	9.46552	42	9.48489	45	0.51511	9.98063	3	1	59	47	46	45	44	43	42	41	40	4	3
60	9.46591		9.48534		0.51466	9 98060		0	60	48	47	46	45	44	43	42	41	4	3
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.									

′	Sin.	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.									
										45	44	43	42	41	40	39	5	4	3
0	9.46594		9.48534		0.51466	9.98060		60											
		41		45			4												
1	9 46635		9.48579		0.51421	9.98056		59	1	1	1	1	1	1	1	1	0	0	0
		41		45			4												
2	9.46676		9.48624		0.51376	9.98052		58	2	1	1	1	1	1	1	1	0	0	0
		41		45			4												
3	9.46717		9.48669		0.51331	9.98048		57	3	2	2	2	2	2	2	2	0	0	0
		41		45			4												
4	9.46758		9.48714		0.51286	9.98044		56	4	3	3	3	3	3	3	3	0	0	0
		42		45			4												
5	9.46800		9.48759		0.51241	9.98040		55	5	4	4	4	3	3	3	3	0	0	0
		41		45			4												
6	9.46841		9.48804		0.51196	9.98036		54	6	4	4	4	4	4	4	4	0	0	0
		41		45			3												
7	9.46882		9.48849		0.51151	9.98033		53	7	5	5	5	5	5	5	5	1	0	0
		41		45			4												
8	9.46923		9.48894		0.51106	9.98029		52	8	6	6	6	6	5	5	5	1	1	0
		41		45			4												
9	9 46964		9.48939		0.51061	9.98025		51	9	7	7	6	6	6	6	6	1	1	0
		41		45			4												
10	9.47005		9.48984		0.51016	9 98021		50	10	7	7	7	7	7	7	6	1	1	0
		40		44			4												
11	9.47045		9.49029		0.50971	9.98017		49	11	8	8	8	8	8	7	7	1	1	1
		41		45			4												
12	9.47086		9.49073		0.50927	9.98013		48	12	9	9	9	8	8	8	8	1	1	1
		41		45			4												
13	9.47127		9.49118		0.50882	9 98009		47	13	10	10	9	9	9	9	8	1	1	1
		41		44			4												
14	9.47168		9.49163		0.50837	9.98005		46	14	10	10	10	10	10	9	9	1	1	1
		41		45			4												
15	9.47209		9.49207		0.50793	9.98001		45	15	11	11	11	10	10	10	10	1	1	1
		40		44			4												
16	9.47249		9.49252		0.50748	9.97997		44	16	12	12	11	11	11	11	10	1	1	1
		41		45			4												
17	9.47290		9.49296		0.50704	9.97993		43	17	13	12	12	12	12	11	11	1	1	1
		40		44			4												
18	9.47330		9.49341		0.50659	9.97989		42	18	13	13	13	13	12	12	12	1	1	1
		41		45			3												
19	9.47371		9.49385		0.50615	9.97986		41	19	14	14	14	13	13	13	12	2	1	1
		40		44			4												
20	9.47411		9.49430		0.50570	9.97982		40	20	15	15	14	14	14	13	13	2	1	1
		41		45			4												
21	9.47452		9.49474		0.50526	9.97978		39	21	16	15	15	15	14	14	14	2	1	1
		40		44			4												
22	9.47492		9.49519		0.50481	9.97974		38	22	16	16	16	15	15	15	14	2	1	1
		41		44			4												
23	9.47533		9.49563		0.50137	9.97970		37	23	17	17	16	16	16	15	15	2	2	1
		40		45			4												
24	9.47573		9.49607		0.50393	9.97966		36	24	18	18	17	17	16	16	16	2	2	1
		40		44			4												
25	9.47613		9.49652		0.50348	9.97962		35	25	19	18	18	17	17	17	16	2	2	1
		41		44			4												
26	9.47654		9.49696		0.50304	9.97958		34	26	19	19	19	18	18	17	17	2	2	1
		40		44			4												
27	9.47694		9.49740		0.50260	9.97954		33	27	20	20	19	19	18	18	18	2	2	1
		40		44			4												
28	9.47734		9.49784		0.50216	9.97950		32	28	21	21	20	20	19	19	18	2	2	1
		40		44			4												
29	9.47774		9.49828		0.50172	9.97946		31	29	22	21	21	20	20	19	19	2	2	1
		40		44			4												
30	9.47814		9.49872		0.50128	9.97942		30	30	22	22	21	21	20	20	19	2	2	1
		40		44			4												
31	9.47854		9.49916		0.50084	9.97938		29	31	23	23	22	22	21	21	20	3	2	2
		40		44			4												
32	9.47894		9.49960		0.50040	9 97934		28	32	24	23	23	22	22	21	21	3	2	2
		40		44			4												
33	9.47934		9.50004		0.49996	9.97930		27	33	25	24	24	23	23	22	21	3	2	2
		40		44			4												
34	9.47974		9.50048		0.49952	9.97926		26	34	25	25	24	24	23	23	22	3	2	2
		40		44			4												
35	9.48014		9.50092		0.49908	9 97922		25	35	26	26	25	24	24	23	23	3	2	2
		40		44			4												
36	9.48054		9.50136		0.49864	9.97918		24	36	27	26	26	25	25	24	23	3	2	2
		40		44			4												
37	9.48094		9.50180		0.49420	9.97914		23	37	28	27	27	26	25	25	24	3	2	2
		39		43			4												
38	9.48133		9.50223		0.49777	9.97910		22	38	28	28	27	27	26	25	25	3	3	2
		40		44			4												
39	9.48173		9.50267		0.49733	9 97906		21	39	29	29	28	27	27	26	25	3	3	2
		40		44			4												
40	9.48213		9.50311		0.49689	9.97902		20	40	30	29	29	28	27	27	26	3	3	2
		39		44			4												
41	9.48252		9.50355		0.49645	9.97898		19	41	31	30	29	29	28	27	27	3	3	2
		40		43			4												
42	9 48292		9.50398		0.49602	9.97894		18	42	31	31	30	29	29	28	27	3	3	2
		40		44			4												
43	9.48332		9.50442		0.49558	9.97890		17	43	32	32	31	30	29	29	28	4	3	2
		39		43			4												
44	9.48371		9.50485		0.49515	9.97886		16	44	33	32	32	31	30	29	29	4	3	2
		40		44			4												
45	9.48411		9.50529		0.49471	9.97882		15	45	34	33	32	31	31	30	29	4	3	2
		39		43			4												
46	9.48450		9.50572		0.49428	9.97878		14	46	34	34	33	32	31	31	30	4	3	2
		40		44			4												
47	9.48490		9.50616		0.49384	9.97874		13	47	35	34	34	33	32	31	31	4	3	2
		39		43			4												
48	9.48529		9.50659		0 49341	9.97870		12	48	36	35	34	34	33	32	31	4	3	2
		39		44			4												
49	9.48568		9.50703		0.49297	9.97866		11	49	37	36	35	34	33	33	32	4	3	2
		39		43			5												
50	9.48607		9.50746		0.49254	9.97861		10	50	37	37	36	35	34	33	32	4	3	2
		40		43			4												
51	9.48647		9.50789		0.49211	9.97857		9	51	38	37	37	36	35	34	33	4	3	3
		39		44			4												
52	9.48686		9.50833		0.49167	9.97853		8	52	39	38	37	36	36	35	34	4	3	3
		39		43			4												
53	9.48725		9.50876		0.49124	9.97849		7	53	40	39	38	37	36	35	34	4	4	3
		39		43			4												
54	9.48764		9.50919		0.49081	9.97845		6	54	40	40	39	38	37	36	35	4	4	3
		39		43			4												
55	9.48803		9.50962		0 49038	9 97841		5	55	41	40	39	38	38	37	36	5	4	3
		39		43			4												
56	9.48842		9.51005		0.48995	9.97837		4	56	42	41	40	39	38	37	36	5	4	3
		39		43			4												
57	9.48881		9.51048		0.48852	9.97833		3	57	43	42	41	40	39	38	37	5	4	3
		39		44			4												
58	9.48920		9.51092		0.48908	9.97829		2	58	43	43	42	41	40	39	38	5	4	3
		39		43			4												
59	9.48959		9.51135		0.48865	9.97825		1	59	44	43	42	41	40	39	38	5	4	3
		39		43			4												
60	9.48998		9.51178		0.48822	9 97821		0	60	45	44	43	42	41	40	39	5	4	3
′	Cos	d.	Cotg	d.c.	Tang	Sin.	d.	′	″	P. P.									

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P									
										43	42	41	40	39	38	37	36	5	4
0	9.48998	39	9.51178	43	0.48822	9.97821	4	60											
1	9.49037	39	9.51221	43	0.48779	9.97817	5	59	1	1	1	1	1	1	1	1	1	0	0
2	9.49076	39	9.51264	42	0.48736	9.97812	4	58	2	1	1	1	1	1	1	1	1	0	0
3	9.49115	38	9.51306	43	0.48694	9.97808	4	57	3	2	2	2	2	2	2	2	2	0	0
4	9.49153	39	9.51349	43	0.48651	9.97804	4	56	4	3	3	3	3	3	3	2	2	0	0
5	9.49192	39	9.51392	43	0.48608	9.97800	4	55	5	4	3	3	3	3	3	3	3	0	0
6	9.49231	38	9.51435	43	0.48565	9.97796	4	54	6	4	4	4	4	4	4	4	4	0	0
7	9.49269	39	9.51478	42	0.48522	9.97792	4	53	7	5	5	5	5	5	4	4	4	1	0
8	9.49308	39	9.51520	43	0.48180	9.97788	4	52	8	6	6	5	5	5	5	5	5	1	1
9	9.49347	38	9.51563	43	0.48137	9.97784	5	51	9	6	6	6	6	6	6	6	5	1	1
10	9.49385	39	9.51606	42	0.48394	9.97779	4	50	10	7	7	7	7	6	6	6	6	1	1
11	9.49424	38	9.51648	43	0.48352	9.97775	4	49	11	8	8	8	7	7	7	7	7	1	1
12	9.49462	38	9.51691	43	0.48309	9.97771	4	48	12	9	8	8	8	8	8	7	7	1	1
13	9.49500	39	9.51734	42	0.48266	9.97767	4	47	13	9	9	9	9	8	8	8	8	1	1
14	9.49539	38	9,51776	43	0.48224	9.97763	4	46	14	10	10	10	9	9	9	9	8	1	1
15	9.49577	38	9.51819	42	0.48181	9.97759	5	45	15	11	10	10	10	10	9	9	9	1	1
16	9.49615	39	9.51861	42	0.48139	9.97754	4	44	16	11	11	11	11	10	10	10	10	1	1
17	9.49654	38	9.51903	43	0.48097	9.97750	4	43	17	12	12	12	11	11	11	10	10	1	1
18	9.49692	38	9.51946	42	0.48054	9.97746	4	42	18	13	13	12	12	12	11	11	11	1	1
19	9.49730	38	9.51988	43	0.48012	9.97742	4	41	19	14	13	13	13	12	12	12	11	2	1
20	9.49768	38	9.52031	42	0.47969	9.97738	4	40	20	14	14	14	13	13	13	12	12	2	1
21	9.49806	38	9.52073	42	0.47927	9.97734	5	39	21	15	15	14	14	14	13	13	13	2	1
22	9.49844	38	9.52115	42	0.47885	9.97729	4	38	22	16	15	15	15	14	14	14	13	2	1
23	9.49882	38	9.52157	43	0.47843	9.97725	4	37	23	16	16	16	15	15	15	14	14	2	2
24	9.49920	38	9.52200	42	0.47800	9.97721	4	36	24	17	17	16	16	16	15	15	14	2	2
25	9.49958	38	9.52242	42	0.47758	9.97717	4	35	25	18	17	17	17	16	16	15	15	2	2
26	9.49996	38	9.52284	42	0.47716	9.97713	5	34	26	19	18	18	17	17	16	16	16	2	2
27	9.50034	38	9.52326	42	0.47674	9.97708	4	33	27	19	19	18	18	18	17	17	16	2	2
28	9.50072	38	9.52368	42	0.47632	9.97704	4	32	28	20	20	19	19	18	18	17	17	2	2
29	9.50110	38	9.52410	42	0.47590	9.97700	4	31	29	21	20	20	19	19	18	18	17	2	2
30	9.50148	37	9.52452	42	0.47548	9.97696	5	30	30	21	21	20	20	19	19	18	18	2	2
31	9.50185	38	9.52494	42	0.47506	9.97691	4	29	31	22	22	21	21	20	20	19	19	3	2
32	9.50223	38	9.52536	42	0.47464	9.97687	4	28	32	23	22	22	21	21	20	20	19	3	2
33	9.50261	37	9.52578	42	0.47422	9.97683	4	27	33	24	23	23	22	21	21	20	20	3	2
34	9.50298	38	9.52620	41	0.47380	9.97679	5	26	34	24	24	23	23	22	22	21	20	3	2
35	9.50336	38	9.52661	42	0.47339	9.97674	4	25	35	25	24	24	23	23	22	22	21	3	2
36	9.50374	37	9.52703	42	0.47297	9.97670	4	24	36	26	25	25	24	23	23	22	22	3	2
37	9.50411	38	9.52745	42	0.47255	9.97666	4	23	37	27	26	25	25	24	23	23	22	3	2
38	9.50449	37	9.52787	42	0.47213	9.97662	5	22	38	27	27	26	25	25	24	23	23	3	3
39	9.50486	37	9.52829	41	0.47171	9.97657	4	21	39	28	27	27	26	25	25	24	23	3	3
40	9.50523	38	9.52870	42	0.47130	9.97653	4	20	40	29	28	27	27	26	25	25	24	3	3
41	9.50561	37	9.52912	41	0.47088	9.97649	4	19	41	29	29	28	27	27	26	25	25	3	3
42	9.50598	37	9.52953	42	0.47047	9.97645	5	18	42	30	29	29	28	27	27	26	25	3	3
43	9.50635	38	9.52995	42	0.47005	9.97640	4	17	43	31	30	29	29	28	27	27	26	4	3
44	9.50673	37	9.53037	41	0.46963	9.97636	4	16	44	32	31	30	29	29	28	27	26	4	3
45	9.50710	37	9.53078	42	0.46922	9.97632	4	15	45	32	31	31	30	29	28	28	27	4	3
46	9.50747	37	9.53120	41	0.46880	9.97628	5	14	46	33	32	31	31	30	29	28	28	4	3
47	9.50784	37	9.53161	41	0.46839	9.97623	4	13	47	34	33	32	31	31	30	29	28	4	3
48	9.50821	37	9.53202	42	0.46798	9.97619	4	12	48	34	34	33	32	31	30	30	29	4	3
49	9.50858	38	9.53244	41	0.46756	9.97615	5	11	49	35	34	33	33	32	31	30	29	4	3
50	9.50896	37	9.53285	42	0.46715	9.97610	4	10	50	36	35	34	33	32	32	31	30	4	3
51	9.50933	37	9.53327	41	0.46673	9.97606	4	9	51	37	36	35	34	33	32	31	31	4	3
52	9.50970	37	9.53368	41	0.46632	9.97602	5	8	52	37	36	36	35	34	33	32	31	4	3
53	9.51007	36	9.53409	41	0.46591	9.97597	4	7	53	38	37	36	35	34	34	33	32	4	4
54	9.51043	37	9.53450	42	0.46550	9.97593	4	6	54	39	38	37	36	35	34	33	32	4	4
55	9.51080	37	9.53492	41	0.46508	9.97589	5	5	55	39	38	38	37	36	35	34	33	5	4
56	9.51117	37	9.53533	41	0.46467	9.97584	4	4	56	40	39	38	37	36	35	35	34	5	4
57	9.51154	37	9.53574	41	0.46426	9.97580	4	3	57	41	40	39	38	37	36	35	34	5	4
58	9.51191	36	9.53615	41	0.46385	9.97576	5	2	58	42	41	40	39	38	37	36	35	5	4
59	9.51227	37	9.53656	41	0.46344	9.97571	4	1	59	42	41	40	39	38	37	36	35	5	4
60	9.51264		9.53697		0.46303	9.97567		0	60	43	42	41	40	39	38	37	36	5	4
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.									

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″
0	9.51264	37	9.53697	41	0.46303	9.97567	4	60	
1	9.51301	37	9.53738	41	0.46262	9.97563	5	59	1
2	9.51338	36	9.53779	41	0.46221	9.97558	4	58	2
3	9.51374	37	9.53820	41	0.46180	9.97554	4	57	3
4	9.51411	36	9.53861	41	0.46139	9.97550	5	56	4
5	9.51447	37	9.53902	41	0.46098	9.97545	4	55	5
6	9.51484	36	9.53943	41	0.46057	9.97541	5	54	6
7	9.51520	37	9.53984	41	0.46016	9.97536	4	53	7
8	9.51557	36	9.54025	40	0.45975	9.97532	4	52	8
9	9.51593	36	9.54065	41	0.45935	9.97528	5	51	9
10	9.51629	37	9.54106	41	0.45894	9.97523	4	50	10
11	9.51666	36	9.54147	40	0.45853	9.97519	4	49	11
12	9.51702	36	9.54187	41	0.45813	9.97515	5	48	12
13	9.51738	36	9.54228	41	0.45772	9.97510	4	47	13
14	9.51774	37	9.54269	40	0.45731	9.97506	5	46	14
15	9.51811	36	9.54309	41	0.45691	9.97501	4	45	15
16	9.51847	36	9.54350	40	0.45650	9.97497	5	44	16
17	9.51883	36	9.54390	41	0.45610	9.97492	4	43	17
18	9.51919	36	9.54431	40	0.45569	9.97488	4	42	18
19	9.51955	36	9.54471	41	0.45529	9.97484	5	41	19
20	9.51991	36	9.54512	40	0.45488	9.97479	4	40	20
21	9.52027	36	9.54552	41	0.45448	9.97475	5	39	21
22	9.52063	36	9.54593	40	0.45407	9.97470	4	38	22
23	9.52099	36	9.54633	40	0.45367	9.97466	5	37	23
24	9.52135	36	9.54673	41	0.45327	9.97461	4	36	24
25	9.52171	36	9.54714	40	0.45286	9.97457	4	35	25
26	9.52207	35	9.54754	40	0.45246	9.97453	5	34	26
27	9.52242	36	9.54794	41	0.45206	9.97448	4	33	27
28	9.52278	36	9.54835	40	0.45165	9.97444	5	32	28
29	9.52314	36	9.54875	40	0.45125	9.97439	4	31	29
30	9.52350	35	9.54915	40	0.45085	9.97435	5	30	30
31	9.52385	36	9.54955	40	0.45045	9.97430	4	29	31
32	9.52421	35	9.54995	40	0.45005	9.97426	5	28	32
33	9.52456	36	9.55035	40	0.44965	9.97421	4	27	33
34	9.52492	35	9.55075	40	0.44925	9.97417	5	26	34
35	9.52527	36	9.55115	40	0.44885	9.97412	4	25	35
36	9.52563	35	9.55155	40	0.44845	9.97408	5	24	36
37	9.52598	36	9.55195	40	0.44805	9.97403	4	23	37
38	9 52634	35	9.55235	40	0.44765	9.97399	5	22	38
39	9.52669	36	9.55275	40	0.44725	9.97394	4	21	39
40	9.52705	35	9.55315	40	0.44685	9.97390	5	20	40
41	9.52740	35	9.55355	40	0.44645	9.97385	4	19	41
42	9.52775	36	9.55395	39	0.44605	9.97381	5	18	42
43	9.52811	35	9.55434	40	0.44566	9.97376	4	17	43
44	9.52846	35	9.55474	40	0.44526	9.97372	5	16	44
45	9.52881	35	9.55514	40	0.44483	9.97367	4	15	45
46	9.52916	35	9.55554	39	0.44446	9.97363	5	14	46
47	9.52951	35	9.55593	40	0.44407	9.97358	5	13	47
48	9.52986	35	9.55633	40	0.44367	9.97353	4	12	48
49	9.53021	35	9.55673	39	0.44327	9.97349	5	11	49
50	9.53056	36	9.55712	40	0.44288	9.97344	4	10	50
51	9 53092	34	9.55752	39	0.44248	9.97340	5	9	51
52	9.53126	35	9.55791	40	0.44209	9.97335	4	8	52
53	9.53161	35	9.55831	39	0.44169	9.97331	5	7	53
54	9.53196	35	9.55870	40	0.44130	9.97326	4	6	54
55	9.53231	35	9.55910	39	0.44090	9.97322	5	5	55
56	9.53266	35	9.55949	40	0.44051	9.97317	5	4	56
57	9.53301	35	9.55989	39	0.44011	9.97312	4	3	57
58	9.53336	34	9.56028	39	0.43972	9.97308	5	2	58
59	9.53370	35	9.56067	40	0.43933	9.97303	4	1	59
60	9.53405		9.56107		0.43893	9.97299		0	60
′	Cos	d.	Cotg	d.c.	Tang	Sin	d	′	′

P. P.								
41	40	39	37	36	35	33	5	4
1	1	1	1	1	1	1	0	0
1	1	1	1	1	1	1	0	0
2	2	2	2	2	2	2	0	0
3	3	3	2	2	2	2	0	0
3	3	3	3	3	3	3	0	0
4	4	4	4	4	3	3	0	0
5	5	5	4	4	4	4	1	0
5	5	5	5	5	5	5	1	1
6	6	6	6	5	5	5	1	1
7	7	6	6	6	6	6	1	1
8	7	7	7	7	6	6	1	1
8	8	8	7	7	7	7	1	1
9	9	8	8	8	8	7	1	1
10	9	9	9	8	8	8	1	1
10	10	10	9	9	9	8	1	1
11	11	10	10	10	9	9	1	1
12	11	11	10	10	10	10	1	1
12	12	12	11	11	10	10	1	1
13	13	12	12	11	11	11	2	1
14	13	13	12	12	12	11	2	1
14	14	14	13	13	12	12	2	1
15	15	14	14	13	13	12	2	1
16	15	15	14	14	13	13	2	2
16	16	16	15	14	14	14	2	2
17	17	16	15	15	15	14	2	2
18	17	17	16	16	15	15	2	2
18	18	18	17	16	16	15	2	2
19	19	18	17	17	16	16	2	2
20	19	19	18	17	17	16	2	2
20	20	19	18	18	17	17	2	2
21	21	20	19	19	18	18	3	2
22	21	21	20	19	19	18	3	2
23	22	21	20	20	19	19	3	2
23	23	22	21	20	20	19	3	2
24	23	23	22	21	20	20	3	2
25	24	23	22	22	21	20	3	2
25	25	24	23	22	22	21	3	2
26	25	25	23	23	22	22	3	3
27	26	25	24	23	23	22	3	3
27	27	26	25	24	23	23	3	3
28	27	27	25	25	24	23	3	3
29	28	27	26	25	24	24	3	3
29	29	28	27	26	25	24	4	3
30	29	29	27	26	26	25	4	3
31	30	29	28	27	26	25	4	3
31	31	30	28	28	27	26	4	3
32	31	31	29	28	27	27	4	3
33	32	31	30	29	28	27	4	3
33	33	32	30	29	29	28	4	3
34	33	32	31	30	29	28	4	3
35	34	33	31	31	30	29	4	3
36	35	34	32	31	30	29	4	3
36	35	34	33	32	31	30	4	4
37	36	35	33	32	31	31	4	4
38	37	36	34	33	32	31	5	4
38	37	36	35	34	33	32	5	4
39	38	37	35	34	33	32	5	4
40	39	38	36	35	34	33	5	4
40	39	38	36	35	34	33	5	4
41	40	39	37	36	35	34	5	4
P. P.								

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.								
										40	39	38	37	36	34	33	3	4
0	9.53405	35	9.56107	39	0.43893	9.97299	5	60										
1	9.53440	35	9.56146	39	0 43854	9.97294	5	59	1	1	1	1	1	1	1	1	0	0
2	9.53475	34	9.56185	39	0.43815	9.97289	4	58	2	1	1	1	1	1	1	1	0	0
3	9.53509	35	9.56224	40	0.43776	9.97285	5	57	3	2	2	2	2	2	2	2	0	0
4	9.53544	34	9 56264	39	0.43736	9.97280	4	56	4	3	3	3	2	2	2	2	0	0
5	9.53578	35	9.56303	39	0.43697	9.97276	5	55	5	3	3	3	3	3	3	3	0	0
6	9.53613	34	9.56342	39	0.43658	9.97271	5	54	6	4	4	4	4	3	3	3	0	0
7	9.53647	35	9.56381	39	0.43619	9.97266	4	53	7	5	5	4	4	4	4	4	1	0
8	9.53682	34	9.56420	39	0.43580	9.97262	5	52	8	5	5	5	5	5	5	4	1	1
9	9.53716	35	9.56459	39	0.43541	9.97257	5	51	9	6	6	6	6	5	5	5	1	1
10	9.53751	34	9.56498	39	0.43502	9.97252	4	50	10	7	6	6	6	6	6	5	1	1
11	9.53785	34	9.56537	39	0.43463	9.97248	5	49	11	7	7	7	7	6	6	6	1	1
12	9.53819	35	9.56576	39	0.43424	9.97243	5	48	12	8	8	8	7	7	7	7	1	1
13	9.53854	34	9.56615	39	0.43385	9.97238	4	47	13	9	8	8	8	8	7	7	1	1
14	9.53888	34	9.56654	39	0.43346	9.97234	5	46	14	9	9	9	9	8	8	8	1	1
15	9.53922	35	9.56693	39	0.43307	9.97229	5	45	15	10	10	9	9	9	8	8	1	1
16	9.53957	34	9.56732	39	0.43268	9.97224	4	44	16	11	10	10	10	9	9	9	1	1
17	9.53991	34	9.56771	39	0.43229	9.97220	5	43	17	11	11	11	10	10	10	9	1	1
18	9.54025	34	9.56810	39	0.43190	9.97215	5	42	18	12	12	11	11	10	10	10	1	1
19	9.54059	34	9.56849	38	0.43151	9.97210	4	41	19	13	12	12	12	11	11	10	2	1
20	9.54093	34	9 56887	39	0.43113	9 97206	5	40	20	13	13	13	12	12	11	11	2	1
21	9.54127	34	9.56926	39	0.43074	9.97201	5	39	21	14	14	13	13	12	12	12	2	1
22	9.54161	34	9.56965	39	0.43035	9.97196	4	38	22	15	14	14	14	13	12	12	2	1
23	9.54195	34	9.57004	38	0.42996	9.97192	5	37	23	15	15	15	14	13	13	13	2	2
24	9.54229	34	9.57042	39	0.42958	9.97187	5	36	24	16	16	15	15	14	14	13	2	2
25	9.54263	34	9.57081	39	0.42919	9.97182	4	35	25	17	16	16	15	15	14	14	2	2
26	9.54297	34	9.57120	38	0.42880	9.97178	5	34	26	17	17	16	16	15	15	14	2	2
27	9.54331	34	9.57158	39	0.42842	9.97173	5	33	27	18	18	17	17	16	15	15	2	2
28	9 54365	34	9.57197	38	0.42803	9.97168	5	32	28	19	18	18	17	16	16	15	2	2
29	9.54399	34	9.57235	39	0.42765	9.97163	4	31	29	19	19	18	18	17	16	16	2	2
30	9.54433	33	9.57274	38	0.42726	9.97159	5	30	30	20	19	19	18	17	17	16	2	2
31	9.54466	34	9.57312	39	0.42688	9.97154	5	29	31	21	20	20	19	18	18	17	3	2
32	9.54500	34	9.57351	38	0.42649	9.97149	4	28	32	21	21	20	20	19	18	18	3	2
33	9.54534	33	9.57389	39	0.42611	9.97145	5	27	33	22	21	21	20	19	19	18	3	2
34	9.54567	34	9.57428	38	0.42572	9.97140	5	26	34	23	22	22	21	20	19	19	3	2
35	9.54601	34	9.57466	38	0.42534	9.97135	5	25	35	23	23	22	22	20	20	19	3	2
36	9.54635	33	9.57504	39	0.42496	9.97130	4	24	36	24	23	23	22	21	20	20	3	2
37	9.54668	34	9.57543	38	0 42457	9.97126	5	23	37	25	24	23	23	22	21	20	3	2
38	9.54702	33	9.57581	38	0.42419	9.97121	5	22	38	25	25	24	23	22	22	21	3	3
39	9.54735	34	9.57619	39	0.42381	9.97116	5	21	39	26	25	25	24	23	22	21	3	3
40	9.54769	33	9.57658	38	0.42342	9.97111	4	20	40	27	26	25	25	23	23	22	3	3
41	9.54802	34	9.57696	38	0.42304	9.97107	5	19	41	27	27	26	25	24	23	23	3	3
42	9.54836	33	9.57734	38	0.42266	9.97102	5	18	42	28	27	27	26	24	24	23	3	3
43	9.54869	34	9.57772	38	0.42228	9 97097	5	17	43	29	28	27	27	25	24	24	4	3
44	9.54903	33	9.57810	39	0·42190	9.97092	5	16	44	29	29	28	27	26	25	24	4	3
45	9.54936	33	9.57849	38	0.42151	9.97087	4	15	45	30	29	28	28	26	25	25	4	3
46	9,54969	34	9.57887	38	0.42113	9 97083	5	14	46	31	30	29	28	27	26	25	4	3
47	9.55003	33	9.57925	38	0.42075	9.97078	5	13	47	31	31	30	29	27	27	26	4	3
48	9.55036	33	9.57963	38	0.42037	9.97073	5	12	48	32	31	30	30	28	27	26	4	3
49	9.55069	33	9.58001	38	0 41999	9.97068	5	11	49	33	32	31	30	29	28	27	4	3
50	9.55102	34	9.58039	38	0.41961	9.97063	4	10	50	33	32	32	31	29	28	27	4	3
51	9.55136	33	9.58077	38	0.41923	9.97059	5	9	51	34	33	32	31	30	29	28	4	3
52	9.55169	33	9 58115	38	0.41885	9 97054	5	8	52	35	34	33	32	30	29	29	4	3
53	9.55202	33	9.58153	38	0.41847	9.97049	5	7	53	35	34	34	33	31	30	29	4	4
54	9.55235	33	9.58191	38	0.41809	9.97044	5	6	54	36	35	34	33	31	31	30	4	4
55	9.55268	33	9.58229	38	0.41771	9.97039	4	5	55	37	36	35	34	32	31	30	5	4
56	9.55301	33	9.58267	37	0.41733	9 97035	5	4	56	37	36	35	35	33	32	31	5	4
57	9.55334	33	9.58304	38	0.41696	9.97030	5	3	57	38	37	36	35	33	32	31	5	4
58	9.55367	33	9.58342	38	0.41658	9 97025	5	2	58	39	38	37	36	34	33	32	5	4
59	9.55400	33	9.58380	38	0.41620	9.97020	5	1	59	39	38	37	36	34	33	32	5	4
60	9.55433		9.58418		0.41582	9 97015		0	60	40	39	38	37	35	34	33	5	4
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.								

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.								
										38	37	36	35	32	31	6	5	4
0	9.55433	33	9.58418	37	0.41582	9.97015	5	60										
1	9.55466	33	9.58455	38	0.41545	9 97010	5	59	1	1	1	1	1	1	1	0	0	0
2	9.55499	33	9.58493	38	0 41507	9 97005	4	58	2	1	1	1	1	1	1	0	0	0
3	9.55532	32	9.58531	38	0.41469	9 97001	5	57	3	2	2	2	2	2	2	0	0	0
4	9.55564	33	9.58569	37	0.41431	9 96996	5	56	4	3	2	2	2	2	2	0	0	0
5	9.55597	33	9.58606	38	0.41394	9.96991	5	55	5	3	3	3	3	3	3	0	0	0
6	9.55630	33	9.58644	37	0.41356	9.96986	5	54	6	4	4	4	3	3	3	1	0	0
7	9.55663	32	9.58681	38	0.41319	9.96981	5	53	7	4	4	4	4	4	4	1	1	0
8	9.55695	33	9.58719	38	0 41281	9.96976	5	52	8	5	5	5	4	4	4	1	1	1
9	9.55728	33	9.58757	37	0.41243	9.96971	5	51	9	6	6	5	5	5	5	1	1	1
10	9.55761	32	9.58794	38	0.41206	9.96966	5	50	10	6	6	6	5	5	5	1	1	1
11	9.55795	33	9.58832	37	0.41168	9.96962	4	49	11	7	7	7	6	6	6	1	1	1
12	9.55826	32	9.58869	38	0.41131	9.96957	5	48	12	8	7	7	7	6	6	1	1	1
13	9.55858	33	9.58907	37	0.41093	9 96952	5	47	13	8	8	8	7	7	7	1	1	1
14	9.55891	32	9.58944	37	0.41056	9.96947	5	46	14	9	9	8	8	7	7	1	1	1
15	9.55923	33	9.58981	38	0.41019	9 96942	5	45	15	9	9	9	8	8	8	1	1	1
16	9.55956	32	9.59019	37	0.40981	9 96937	5	44	16	10	10	10	9	9	8	2	1	1
17	9.55988	33	9.59056	38	0 40944	9.96932	5	43	17	11	10	10	9	9	9	2	1	1
18	9.56021	32	9.59094	37	0.40906	9.96927	5	42	18	11	11	11	10	10	9	2	1	1
19	9.56053	32	9.59131	37	0.40869	9 96922	5	41	19	12	12	11	10	10	10	2	2	1
20	9.56085	33	9.59168	37	0.40832	9.96917	5	40	20	13	12	12	11	11	10	2	2	1
21	9.56118	32	9 59205	38	0.40795	9.96912	5	39	21	13	13	13	12	11	11	2	2	1
22	9.56150	32	9.59243	37	0.40757	9.96907	4	38	22	14	14	13	12	12	11	2	2	1
23	9.56182	33	9.59280	37	0.40720	9.96903	5	37	23	15	14	14	13	12	12	2	2	2
24	9.56215	32	9.59317	37	0.40683	9.96898	5	36	24	15	15	14	13	13	12	2	2	2
25	9.56247	32	9.59354	37	0.40646	9 96893	5	35	25	16	15	15	14	13	13	2	2	2
26	9.56279	32	9.59391	38	0 40609	9 96888	5	34	26	16	16	16	14	14	13	3	2	2
27	9.56311	32	9.59429	37	0.40571	9.96883	5	33	27	17	17	16	15	14	14	3	2	2
28	9.56343	32	9.59466	37	0 40534	9.96878	5	32	28	18	17	17	15	15	14	3	2	2
29	9.56375	33	9 59503	37	0.40497	9.96873	5	31	29	18	18	17	16	15	15	3	2	2
30	9.56408	32	9.59540	37	0.40460	9.96868	5	30	30	19	18	18	16	16	15	3	2	2
31	9.56440	32	9.59577	37	0.40423	9.96863	5	29	31	20	19	19	17	17	16	3	3	2
32	9.56472	32	9.59614	37	0.40386	9.96858	5	28	32	20	20	19	18	17	17	3	3	2
33	9.56504	32	9.59651	37	0.40349	9 96853	5	27	33	21	20	20	18	18	17	3	3	2
34	9.56536	32	9.59688	37	0.40312	9.96848	5	26	34	22	21	20	19	18	18	3	3	2
35	9.56568	31	9.59725	37	0.40275	9.96843	5	25	35	22	22	21	19	19	18	3	3	2
36	9.56599	32	9 59762	37	0.40238	9 96838	5	24	36	23	22	22	20	19	19	4	3	2
37	9.56631	32	9.59799	36	0.40201	9.96833	5	23	37	23	23	22	20	20	19	4	3	2
38	9.56663	32	9.59835	37	0.40165	9.96828	5	22	38	24	23	23	21	20	20	4	3	3
39	9.56695	32	9.59872	37	0.40128	9.96823	5	21	39	25	24	23	21	21	20	4	3	3
40	9.56727	32	9.59909	37	0 40091	9 96818	5	20	40	25	25	24	22	21	21	4	3	3
41	9.56759	31	9.59946	37	0.40054	9.96813	5	19	41	26	25	25	23	22	21	4	3	3
42	9.56790	32	9.59983	36	0.40017	9.96808	5	18	42	27	26	25	23	22	22	4	3	3
43	9.56822	32	9.60019	37	0.39981	9 96803	5	17	43	27	27	26	24	23	22	4	4	3
44	9.56854	32	9.60056	37	0 39944	9 96798	5	16	44	28	27	26	24	23	23	4	4	3
45	9.56886	31	9.60093	37	0.39907	9 96793	5	15	45	28	28	27	25	24	23	4	4	3
46	9.56917	32	9 60130	36	0.39870	9 96788	5	14	46	29	28	28	25	25	24	5	4	3
47	9.56949	31	9.60166	37	0 39834	9 96783	5	13	47	30	29	28	26	25	24	5	4	3
48	9.56980	32	9.60203	37	0.39797	9.96778	6	12	48	30	30	29	26	26	25	5	4	3
49	9.57012	32	9.60240	36	0.39760	9 96772	5	11	49	31	30	29	27	26	25	5	4	3
50	9.57044	31	9.60276	37	0.39724	9.96767	5	10	50	32	31	30	27	27	26	5	4	3
51	9.57075	32	9.60313	36	0.39687	9.96762	5	9	51	32	31	31	28	27	26	5	4	3
52	9.57107	31	9 60349	37	0.39651	9.96757	5	8	52	33	32	31	29	28	27	5	4	3
53	9.57138	31	9 60386	36	0 39614	9.96752	5	7	53	34	33	32	29	28	27	5	4	4
54	9.57169	32	9.60422	37	0.39578	9.96747	5	6	54	34	33	32	30	29	28	5	4	4
55	9.57201	31	9.60459	36	0.39541	9.96742	5	5	55	35	34	33	30	29	28	5	5	4
56	9.57232	32	9.60495	37	0.39505	9 96737	5	4	56	35	35	34	31	30	29	6	5	4
57	9.57264	31	9.60532	36	0.39468	9 96732	5	3	57	36	35	34	31	30	29	6	5	4
58	9.57295	31	9.60568	37	0.39432	9.96727	5	2	58	37	36	35	32	31	30	6	5	4
59	9.57326	32	9.60605	36	0.39395	9.96722	5	1	59	37	36	35	32	31	30	6	5	4
60	9.57358		9.60641		0.39359	9 96717		0	60	38	37	36	33	32	31	6	5	4
′	Cos	d	Cotg	d.c.	Tang	Sin	d	′	″	P. P.								

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.								
										37	36	35	32	31	30	29	6	5
0	9.57358	31	9.60641	36	0.39359	9.96717	6	60										
1	9.57389	31	9.60677	37	0.39323	9.96711	5	59	1	1	1	1	1	1	0	0	0	0
2	9.57420	31	9.60714	36	0.39286	9.96706	5	58	2	1	1	1	1	1	1	1	0	0
3	9.57451	31	9.60750	36	0.39250	9 96701	5	57	3	2	2	2	2	2	1	1	0	0
4	9.57482	32	9.60786	37	0.39214	9.96696	5	56	4	2	2	2	2	2	2	2	0	0
5	9.57514	31	9.60823	36	0.39177	9.96691	5	55	5	3	3	3	3	3	2	2	0	0
6	9.57545	31	9.60859	36	0.39141	9.96686	5	54	6	4	4	3	3	3	3	3	1	0
7	9.57576	31	9.60895	36	0.39105	9.96681	5	53	7	4	4	4	4	4	3	3	1	1
8	9.57607	31	9.60931	36	0.39069	9.96676	6	52	8	5	5	5	4	4	4	4	1	1
9	9.57638	31	9.60967	37	0.39033	9.96670	5	51	9	6	5	5	5	5	4	4	1	1
10	9.57669	31	9.61004	36	0.38996	9.96665	5	50	10	6	6	6	5	5	5	5	1	1
11	9 57700	31	9.61040	36	0.38960	9.96660	5	49	11	7	7	6	6	6	5	5	1	1
12	9.57731	31	9.61076	36	0 38924	9.96655	5	48	12	7	7	7	6	6	6	6	1	1
13	9.57762	31	9 61112	36	0.38888	9.96650	5	47	13	8	8	8	7	7	6	6	1	1
14	9.57793	31	9.61148	36	0.38852	9.96645	5	46	14	9	8	8	7	7	7	7	1	1
15	9.57824	31	9.61184	36	0 38816	9 96640	6	45	15	9	9	9	8	8	7	7	1	1
16	9.57855	30	9.61220	36	0.38780	9.96634	5	44	16	10	10	9	9	8	8	8	2	1
17	9.57885	31	9.61256	36	0.38744	9.96629	5	43	17	10	10	10	9	9	8	8	2	1
18	9.57916	31	9.61292	36	0 38708	9.96624	5	42	18	11	11	10	10	9	9	9	2	1
19	9.57947	31	9.61328	36	0.38672	9.96619	5	41	19	12	11	11	10	10	9	9	2	2
20	9.57978	30	9.61364	36	0.38636	9.96614	6	40	20	12	12	12	11	10	10	10	2	2
21	9.58008	31	9.61400	36	0.38600	9.96908	5	39	21	13	13	12	11	11	10	10	2	2
22	9.58039	31	9.61436	36	0.38564	9.96603	5	38	22	14	13	13	12	11	11	11	2	2
23	9.58070	31	9.61472	36	0.38528	9.96598	5	37	23	14	14	13	12	12	11	11	2	2
24	9.58101	30	9.61508	36	0.38492	9.96593	5	36	24	15	14	14	13	12	12	12	2	2
25	9.58131	31	9.61544	35	0.38456	9.96588	6	35	25	15	15	15	13	13	12	12	2	2
26	9.58162	30	9.61579	36	0.38421	9.96582	5	34	26	16	16	15	14	13	13	13	3	2
27	9.58192	31	9.61615	36	0.38385	9.96577	5	33	27	17	16	16	14	14	13	13	3	2
28	9.58223	30	9.61651	36	0.38349	9.96572	5	32	28	17	17	16	15	14	14	14	3	2
29	9.58253	31	9.61687	35	0.38313	9.96567	5	31	29	18	17	17	15	15	14	14	3	2
30	9.58284	30	9.61722	36	0.38278	9.96562	6	30	30	18	18	17	16	15	15	14	3	2
31	9.58314	31	9.61758	36	0 38242	9 96556	5	29	31	19	19	18	17	16	15	15	3	3
32	9.58345	30	9.61794	36	0.38206	9.96551	5	28	32	20	19	19	17	17	16	15	3	3
33	9.58375	31	9.61830	36	0.38170	9.96546	5	27	33	20	20	19	18	17	16	16	3	3
34	9.58406	30	9.61865	35	0.38135	9.96541	6	26	34	21	20	20	18	18	17	16	3	3
35	9.58436	31	9.61901	36	0.38099	9.96535	5	25	35	22	21	20	19	18	17	17	3	3
36	9.58467	30	9.61936	35	0.38064	9.96530	5	24	36	22	22	21	19	19	18	17	4	3
37	9.58497	30	9.61972	36	0.37028	9.96525	5	23	37	23	22	22	20	19	18	18	4	3
38	9.58527	30	9 62008	36	0.37992	9.96520	6	22	38	23	23	22	20	20	19	18	4	3
39	9.58557	31	9.62043	35	0.37957	9.96514	5	21	39	24	23	23	21	20	19	19	4	3
40	9.58588	30	9.62079	36	0.37921	9.96509	5	20	40	25	24	23	21	21	20	19	4	3
41	9.58618	30	9 62114	35	0.37886	9.96504	6	19	41	25	25	24	22	21	20	20	4	3
42	9.58648	30	9.62150	36	0.37850	9 96498	5	18	42	26	25	24	22	22	21	20	4	3
43	9.58678	31	9.62185	35	0.37815	9 96493	5	17	43	27	26	25	23	22	21	21	4	4
44	9·58709	30	9.62221	36	0.37779	9.96488	5	16	44	27	26	26	23	23	22	21	4	4
45	9.58739	30	9.62256	35	0.37744	9.96483	6	15	45	28	27	26	24	23	22	22	4	4
46	9.58769	30	9.62292	36	0.37708	9.96477	5	14	46	28	28	27	25	24	23	22	5	4
47	9.58799	30	9.62327	35	0 37673	9.96472	5	13	47	29	28	27	25	24	23	23	5	4
48	9.58829	30	9.62362	35	0.37638	9.96467	6	12	48	30	29	28	26	25	24	23	5	4
49	9.58859	30	9.62398	36	0.37602	9.96461	5	11	49	30	29	29	26	25	24	24	5	4
50	9.58889	30	9.62433	35	0.37567	9 96456	5	10	50	31	30	29	27	26	25	24	5	4
51	9.58919	30	9.62468	35	0.37532	9.96451	6	9	51	31	31	30	27	26	25	25	5	4
52	9.58949	30	9.62504	36	0.37496	9.96445	5	8	52	32	31	30	28	27	26	25	5	4
53	9.58979	30	9.62539	35	0.37461	9.96440	5	7	53	33	32	31	28	27	26	26	5	4
54	9.59009	30	9.62574	35	0.37426	9.96435	6	6	54	33	32	31	29	28	27	26	5	4
55	9.59039	30	9.62609	36	0.37391	9.96429	5	5	55	34	33	32	29	28	27	27	5	5
56	9.59069	29	9.62645	35	0.37355	9.96424	5	4	56	35	34	33	30	29	28	27	6	5
57	9.59098	30	9.62680	35	0.37320	9.96419	6	3	57	35	34	33	30	29	28	28	6	5
58	9.59128	30	9.62715	35	0.37285	9.96413	5	2	58	36	35	34	31	30	29	28	6	5
59	9.59158	30	9.62750	35	0.37250	9.96408	5	1	59	36	35	34	31	30	29	29	6	5
60	9.59188		9.62785		0.37215	9.96403		0	60	37	36	35	32	31	30	29	6	5
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.								

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.							
										36	35	34	30	31	28	6	5
0	9.59188	30	9.62785	35	0.37215	9.96403	6	60									
1	9.59218	29	9.62820	35	0.37180	9.96397	5	59	1	1	1	1	0	0	0	0	0
2	9.59247	30	9.62855	35	0.37145	9.96392	5	58	2	1	1	1	1	1	1	0	0
3	9.59277	30	9.62890	36	0.37110	9.96387	6	57	3	2	2	2	1	1	1	0	0
4	9.59307	29	9.62926	35	0.37074	9.96381	5	56	4	2	2	2	2	2	2	0	0
5	9.59336	30	9.62961	35	0.37039	9.96376	6	55	5	3	3	3	2	2	2	0	0
6	9.59366	30	9.62996	35	0.37004	9.96370	5	54	6	4	3	3	3	3	3	1	0
7	9.59396	29	9.63031	35	0.36969	9.96365	5	53	7	4	4	4	3	3	3	1	1
8	9.59425	30	9.63066	35	0.36934	9.96360	6	52	8	5	5	5	4	4	4	1	1
9	9.59455	30	9.63101	35	0.36899	9.96354	5	51	9	5	5	5	4	4	4	1	1
10	9.59484	30	9.63135	34	0.36865	9.96349	6	50	10	6	6	6	5	5	5	1	1
11	9.59514	29	9.63170	35	0.36830	9.96343	5	49	11	7	6	6	5	5	5	1	1
12	9.59543	30	9.63205	35	0.36795	9.96338	5	48	12	7	7	7	6	6	6	1	1
13	9.59573	29	9.63240	35	0.36760	9.96333	6	47	13	8	8	7	6	6	6	1	1
14	9.59602	30	9.63275	35	0.36725	9.96327	5	46	14	8	8	8	7	7	7	1	1
15	9.59632	29	9.63310	35	0.36690	9.96322	6	45	15	9	9	8	7	7	7	1	1
16	9.59661	29	9.63345	34	0.36655	9.96316	5	44	16	10	9	9	8	8	7	2	1
17	9.59690	30	9.63379	35	0.36621	9.96311	6	43	17	10	10	10	8	8	8	2	1
18	9.59720	29	9.63414	35	0.36586	9.96305	5	42	18	11	10	10	9	9	8	2	1
19	9.59749	29	9.63449	35	0.36551	9.96300	6	41	19	11	11	11	9	9	9	2	2
20	9.59778	30	9.63484	35	0.36516	9.96294	5	40	20	12	12	11	10	10	9	2	2
21	9.59808	29	9.63519	34	0.36481	9.96289	5	39	21	13	12	12	10	10	10	2	2
22	9.59837	29	9.63553	35	0.36447	9.96284	6	38	22	13	13	12	11	11	10	2	2
23	9.59866	29	9.63588	35	0.36412	9.96278	5	37	23	14	13	13	11	11	11	2	2
24	9.59895	29	9.63623	34	0.36377	9.96273	6	36	24	14	14	14	12	12	11	2	2
25	9.59924	30	9.63657	35	0.36343	9.96267	5	35	25	15	15	14	12	12	12	2	2
26	9.59954	29	9.63692	34	0.36308	9.96262	6	34	26	16	15	15	13	13	12	3	2
27	9.59983	29	9.63726	35	0.36274	9.96256	5	33	27	16	16	15	13	13	13	3	2
28	9.60012	29	9.63761	35	0.36239	9.96251	6	32	28	17	16	16	14	14	13	3	2
29	9.60041	29	9.63796	34	0.36204	9.96245	5	31	29	17	17	16	14	14	14	3	2
30	9.60070	29	9.63830	35	0.36170	9.96240	6	30	30	18	17	17	15	14	14	3	2
31	9.60099	29	9.63865	34	0.36135	9.96234	5	29	31	19	18	18	15	15	14	3	3
32	9.60128	29	9.63899	35	0.36101	9.96229	6	28	32	19	19	18	16	15	15	3	3
33	9.60157	29	9.63934	34	0.36066	9.96223	5	27	33	20	19	19	16	16	15	3	3
34	9.60186	29	9.63968	35	0.36032	9.96218	6	26	34	20	20	19	17	16	16	3	3
35	9.60215	29	9.64003	34	0.35997	9.96212	5	25	35	21	20	20	17	17	16	3	3
36	9.60244	29	9.64037	35	0.35963	9.96207	6	24	36	22	21	20	18	17	17	4	3
37	9.60273	29	9.64072	34	0.35928	9.96201	5	23	37	22	22	21	18	18	17	4	3
38	9.60302	29	9.64106	34	0.35894	9.96196	6	22	38	23	22	22	19	18	18	4	3
39	9.60331	28	9.64140	35	0.35860	9.96190	5	21	39	23	23	22	19	19	18	4	3
40	9.60359	29	9.64175	34	0.35825	9.96185	6	20	40	24	23	23	20	19	19	4	3
41	9.60388	29	9.64209	34	0.35791	9.96179	5	19	41	25	24	23	20	20	19	4	3
42	9.60417	29	9.64243	35	0.35757	9.96174	6	18	42	25	24	24	21	20	20	4	3
43	9.60446	28	9.64278	34	0.35722	9.96168	6	17	43	26	25	24	21	21	20	4	4
44	9.60474	29	9.64312	34	0.35688	9.96162	5	16	44	26	26	25	22	21	21	4	4
45	9.60503	29	9.64346	35	0.35654	9.96157	6	15	45	27	26	25	22	22	21	4	4
46	9.60532	29	9.64381	34	0.35619	9.96151	5	14	46	28	27	26	23	22	21	5	4
47	9.60561	28	9.64415	34	0.35585	9.96146	6	13	47	28	27	27	23	23	22	5	4
48	9.60589	29	9.64449	34	0.35551	9.96140	5	12	48	29	28	27	24	23	22	5	4
49	9.60618	28	9.64483	34	0.35517	9.96135	6	11	49	29	29	28	24	24	23	5	4
50	9.60646	29	9.64517	35	0.35483	9.96129	6	10	50	30	29	28	25	24	23	5	4
51	9.60675	28	9.64552	34	0.35448	9.96123	5	9	51	31	30	29	25	25	24	5	4
52	9.60704	29	9.64586	34	0.35414	9.96118	6	8	52	31	30	29	26	25	24	5	4
53	9.60732	29	9.64620	34	0.35380	9.96112	5	7	53	32	31	30	26	26	25	5	4
54	9.60761	28	9.64654	34	0.35346	9.96107	6	6	54	32	31	31	27	26	25	5	4
55	9.60789	29	9.64688	34	0.35312	9 96101	6	5	55	33	32	31	27	27	26	5	5
56	9.60818	28	9.64722	34	0.35278	9.96095	5	4	56	34	33	32	28	27	26	6	5
57	9.60846	29	9.64756	34	0.35244	9.96090	6	3	57	34	33	32	28	28	27	6	5
58	9.60875	28	9.64790	34	0.35210	9.96084	5	2	58	35	34	33	29	28	27	6	5
59	9.60903	28	9.64824	34	0.35176	9.96079	6	1	59	35	34	33	29	29	28	6	5
60	9.60931		9.64858		0.35142	9.96073		0	60	36	35	34	30	29	28	6	5
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.							

′	Sin	d.	Tang	d.c	Cotg	Cos	d.	′	″	P. P.							
										31	33	3	29	28	27	6	5
0	9.60931	29	9.64858	34	0.35142	9.96073	6	60									
1	9.60960	28	9.64892	34	0.35108	9.96067	5	59	1	1	1	1	0	0	0	0	0
2	9.60988	28	9.64926	34	0.35074	9.96062	6	58	2	1	1	1	1	1	1	0	0
3	9.61016	29	9.64960	34	0.35040	9.96056	6	57	3	2	2	2	1	1	1	0	0
4	9.61045	28	9.64994	34	0.35006	9.96050	5	56	4	2	2	2	2	2	2	0	0
5	9.61073	28	9.65028	34	0.34972	9.96045	6	55	5	3	3	3	2	2	2	0	0
6	9.61101	28	9.65062	34	0.34938	9.96039	5	54	6	3	3	3	3	3	3	1	0
7	9.61129	29	9.65096	34	0.34904	9.96034	6	53	7	4	4	4	3	3	3	1	1
8	9.61158	28	9.65130	34	0.34870	9.96028	6	52	8	5	4	4	4	4	4	1	1
9	9.61186	28	9.65164	33	0.34836	9.96022	5	51	9	5	5	5	4	4	4	1	1
10	9.61214	28	9.65197	34	0.34803	9.96017	6	50	10	6	5	5	5	5	4	1	1
11	9.61242	28	9.65231	34	0.34769	9.96011	6	49	11	6	6	6	5	5	5	1	1
12	9.61270	28	9.65265	34	0.34735	9.96005	5	48	12	7	7	6	6	6	5	1	1
13	9.61298	28	9.65299	34	0.34701	9.96000	6	47	13	7	7	7	6	6	6	1	1
14	9.61326	28	9.65333	33	0.34667	9.95994	6	46	14	8	8	7	7	7	6	1	1
15	9.61354	28	9.65366	34	0.34634	9.95988	6	45	15	8	8	8	7	7	7	1	1
16	9.61382	29	9.65400	34	0.34600	9.95982	5	44	16	9	9	9	8	7	7	2	1
17	9.61411	27	9.65434	33	0.34566	9.95977	6	43	17	10	9	9	8	8	8	2	1
18	9.61438	28	9.65467	34	0.34533	9.95971	6	42	18	10	10	10	9	8	8	2	1
19	9.61466	28	9.65501	34	0.34499	9.95965	5	41	19	11	10	10	9	9	9	2	2
20	9.61494	28	9.65535	33	0.34465	9.95960	6	40	20	11	11	11	10	9	9	2	2
21	9.61522	28	9.65568	34	0.34432	9.95954	6	39	21	12	12	11	10	10	9	2	2
22	9.61550	28	9.65602	34	0.34398	9.95948	6	38	22	12	12	12	11	10	10	2	2
23	9.61578	28	9.65636	33	0.34364	9.95942	5	37	23	13	13	12	11	11	10	2	2
24	9.61606	28	9.65669	34	0.34331	9.95937	6	36	24	14	13	13	12	11	11	2	2
25	9.61634	28	9.65703	33	0.34297	9.95931	6	35	25	14	14	13	12	12	11	2	2
26	9.61662	27	9.65736	34	0.34264	9.95925	5	34	26	15	14	14	13	12	12	3	2
27	9.61689	28	9.65770	33	0.34230	9.95920	6	33	27	15	15	14	13	13	12	3	2
28	9.61717	28	9.65803	34	0.34197	9.95914	6	32	28	16	15	15	14	13	13	3	2
29	9.61745	28	9.65837	33	0.34163	9.95908	6	31	29	16	16	15	14	14	13	3	2
30	9.61773	27	9.65870	34	0.34130	9.95902	5	30	30	17	16	16	14	14	13	3	2
31	9.61800	28	9.65904	33	0.34096	9.95897	6	29	31	18	17	17	15	14	14	3	3
32	9.61828	28	9.65937	34	0.34063	9.95891	6	28	32	18	18	17	15	15	14	3	3
33	9.61856	27	9.65971	33	0.34029	9.95885	6	27	33	19	18	18	16	15	15	3	3
34	9.61883	28	9.66004	34	0.33996	9.95879	6	26	34	19	19	18	16	16	15	3	3
35	9.61911	28	9.66038	33	0.33962	9.95873	5	25	35	20	19	19	17	16	16	3	3
36	9.61939	27	9.66071	33	0.33929	9.95868	6	24	36	20	20	19	17	17	16	4	3
37	9.61966	28	9.66104	34	0.33896	9.95862	6	23	37	21	20	20	18	17	17	4	3
38	9.61994	27	9.66138	33	0.33862	9.95856	6	22	38	22	21	20	18	18	17	4	3
39	9.62021	28	9.66171	33	0.33829	9.95850	6	21	39	22	21	21	19	18	18	4	3
40	9.62049	27	9.66204	34	0.33796	9.95844	5	20	40	23	22	21	19	19	18	4	3
41	9.62076	28	9.66238	33	0.33762	9.95839	6	19	41	23	23	22	20	19	18	4	3
42	9.62104	27	9.66271	33	0.33729	9.95833	6	18	42	24	23	22	20	20	19	4	3
43	9.62131	28	9.66304	33	0.33696	9.95827	6	17	43	24	24	23	21	20	19	4	4
44	9.62159	27	9.66337	34	0.33663	9.95821	6	16	44	25	24	23	21	21	20	4	4
45	9.62186	28	9.66371	33	0.33629	9 95815	5	15	45	25	25	24	22	21	20	4	4
46	9.62214	27	9.66404	33	0.33596	9.95810	6	14	46	26	25	25	22	21	21	5	4
47	9.62241	27	9.66437	33	0.33563	9.95804	6	13	47	27	26	25	23	22	21	5	4
48	9.62268	28	9.66470	33	0.33530	9.95798	6	12	48	27	26	26	23	22	22	5	4
49	9.62296	27	9.66503	34	0.33497	9.95792	6	11	49	28	27	26	24	23	22	5	4
50	9 62323	27	9.66537	33	0.33463	9.95786	6	10	50	28	27	27	24	23	22	5	4
51	9 62350	27	9.66570	33	0.33430	9.95780	5	9	51	29	28	27	25	24	23	5	4
52	9.62377	28	9.66603	33	0.33397	9.95775	6	8	52	29	29	28	25	24	23	5	4
53	9.62405	27	9.66636	33	0.33364	9.95769	6	7	53	30	29	28	26	25	24	5	4
54	9.62432	27	9.66669	33	0.33331	9.95763	6	6	54	31	30	29	26	25	24	5	4
55	9.62459	27	9.66702	33	0.33298	9.95757	6	5	55	31	30	29	27	26	25	5	5
56	9.62486	27	9.66735	33	0.33265	9.95751	6	4	56	32	31	30	27	26	25	6	5
57	9.62513	28	9.66768	33	0.33232	9.95745	6	3	57	32	31	30	28	27	26	6	5
58	9.62541	27	9.66801	33	0.33199	9.95739	6	2	58	33	32	31	28	27	26	6	5
59	9.62568	27	9.66834	33	0.33166	9.95733	5	1	59	33	32	31	29	28	27	6	5
60	9.62595		9 66867		0.33133	9.95728		0	60	34	33	32	29	28	27	6	5
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.							

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.							
										33	32	27	26	25	7	6	5
0	9.62595		9.66867		0.33133	9.95728		60									
		27		33			6										
1	9.62622		9.66900		0.33100	9.95722		59	1	1	1	0	0	0	0	0	0
		27		33			6										
2	9.62649		9.66933		0.33067	9.95716		58	2	1	1	1	1	1	0	0	0
		27		33			6										
3	9.62676		9.66966		0.33034	9.95710		57	3	2	2	1	1	1	0	0	0
		27		33			6										
4	9.62703		9.66999		0.33001	9.95704		56	4	2	2	2	2	2	0	0	0
		27		33			6										
5	9.62730		9.67032		0.32968	9.95698		55	5	3	3	2	2	2	1	0	0
		27		33			6										
6	9.62757		9.67065		0.32935	9.95692		54	6	3	3	3	3	2	1	1	0
		27		33			6										
7	9.62784		9.67098		0.32902	9.95686		53	7	4	4	3	3	3	1	1	1
		27		33			6										
8	9.62811		9.67131		0.32869	9.95680		52	8	4	4	4	3	3	1	1	1
		27		32			6										
9	9.62838		9.67163		0.32837	9 95674		51	9	5	5	4	4	4	1	1	1
		27		33			6										
10	9.62865		9.67196		0.32804	9.95668		50	10	5	5	4	4	4	1	1	1
		27		33			5										
11	9.62892		9.67229		0.32771	9.95663		49	11	6	6	5	5	5	1	1	1
		26		33			6										
12	9.62918		9.67262		0.32738	9.95657		48	12	7	6	5	5	5	1	1	1
		27		33			6										
13	9.62945		9.67295		0.32705	9.95651		47	13	7	7	6	6	5	2	1	1
		27		32			6										
14	9.62972		9.67327		0.32673	9.95645		46	14	8	7	6	6	6	2	1	1
		27		33			6										
15	9.62999		9.67360		0.32640	9.95639		45	15	8	8	7	6	6	2	1	1
		27		33			6										
16	9.63026		9.67393		0.32607	9.95633		44	16	9	9	7	7	7	2	2	1
		26		33			6										
17	9.63052		9.67426		0.32574	9.95627		43	17	9	9	8	7	7	2	2	1
		27		32			6										
18	9.63079		9.67458		0.32542	9.95621		42	18	10	10	8	8	7	2	2	1
		27		33			6										
19	9.63106		9.67491		0.32509	9.95615		41	19	10	10	9	8	8	2	2	2
		27		33			6										
20	9.63133		9.67524		0.32476	9.95609		40	20	11	11	9	9	8	2	2	2
		26		32			6										
21	9.63159		9.67556		0.32444	9.95603		39	21	12	11	9	9	9	2	2	2
		27		33			6										
22	9.63186		9.67589		0.32411	9.95597		38	22	12	12	10	10	9	3	2	2
		27		33			6										
23	9.63213		9.67622		0.32378	9.95591		37	23	13	12	10	10	10	3	2	2
		26		32			6										
24	9.63239		9.67654		0.32346	9.95585		36	24	13	13	11	10	10	3	2	2
		27		33			6										
25	9.63266		9.67687		0.32313	9.95579		35	25	14	13	11	11	10	3	2	2
		26		32			6										
26	9.63292		9.67719		0.32281	9.95573		34	26	14	14	12	11	11	3	3	2
		27		33			6										
27	9.63319		9.67752		0.32248	9.95567		33	27	15	14	12	12	11	3	3	2
		26		33			6										
28	9.63345		9.67785		0.32215	9.95561		32	28	15	15	13	12	12	3	3	2
		27		32			6										
29	9.63372		9.67817		0.32183	9.95555		31	29	16	15	13	13	12	3	3	2
		26		33			6										
30	9.63398		9.67850		0.32150	9.95549		30	30	16	16	13	13	12	3	3	2
		27		32			6										
31	9.63425		9.67882		0.32118	9.95543		29	31	17	17	14	13	13	4	3	3
		26		33			6										
32	9.63451		9.67915		0.32085	9.95537		28	32	18	17	14	14	13	4	3	3
		27		32			6										
33	9.63478		9.67947		0.32053	9.95531		27	33	18	18	15	14	14	4	3	3
		26		33			6										
34	9.63504		9.67980		0.32020	9.95525		26	34	19	18	15	15	14	4	3	3
		27		32			6										
35	9.63531		9.68012		0.31988	9.95519		25	35	19	19	16	15	15	4	3	3
		26		32			6										
36	9.63557		9.68044		0.31956	9.95513		24	36	20	19	16	16	15	4	4	3
		26		33			6										
37	9.63583		9.68077		0.31923	9.95507		23	37	20	20	17	16	15	4	4	3
		27		32			7										
38	9.63610		9.68109		0.31891	9.95500		22	38	21	20	17	16	16	4	4	3
		26		33			6										
39	9.63636		9.68142		0.31858	9.95494		21	39	21	21	18	17	16	5	4	3
		26		32			6										
40	9.63662		9.68174		0.31826	9.95488		20	40	22	21	18	17	17	5	4	3
		27		32			6										
41	9.63689		9.68206		0.31794	9.95482		19	41	23	22	18	18	17	5	4	3
		26		33			6										
42	9.63715		9.68239		0.31761	9.95476		18	42	23	22	19	18	18	5	4	3
		26		32			6										
43	9.63741		9.68271		0.31729	9.95470		17	43	24	23	19	19	18	5	4	4
		26		32			6										
44	9.63767		9.68303		0.31697	9.95464		16	44	24	23	20	19	18	5	4	4
		27		33			6										
45	9.63794		9.68336		0.31664	9.95458		15	45	25	24	20	19	19	5	4	4
		26		32			6										
46	9.63820		9.68368		0.31632	9.95452		14	46	25	25	21	20	19	5	5	4
		26		32			6										
47	9.63846		9 68400		0.31600	9.95446		13	47	26	25	21	20	20	5	5	4
		26		32			6										
48	9.63872		9.68432		0.31568	9.95440		12	48	26	26	22	21	20	6	5	4
		26		33			6										
49	9.63898		9.68465		0.31535	9.95434		11	49	27	26	22	21	20	6	5	4
		26		32			7										
50	9.63924		9.68497		0.31503	9.95427		10	50	27	27	22	22	21	6	5	4
		26		32			6										
51	9.63950		9.68529		0.31471	9.95421		9	51	28	27	23	22	21	6	5	4
		26		32			6										
52	9.63976		9.68561		0.31439	9.95415		8	52	29	28	23	23	22	6	5	4
		26		32			6										
53	9.64002		9.68593		0.31407	9.95409		7	53	29	28	24	23	22	6	5	4
		26		33			6										
54	9.64028		9.68626		0.31374	9.95403		6	54	30	29	24	23	23	6	5	4
		26		32			6										
55	9.64054		9.68658		0.31342	9.95397		5	55	30	29	25	24	23	6	5	5
		26		32			6										
56	9.64080		9.68690		0.31310	9.95391		4	56	31	30	25	24	23	7	6	5
		26		32			7										
57	9.64106		9.68722		0.31278	9.95384		3	57	31	30	26	25	24	7	6	5
		26		32			6										
58	9.64132		9.68754		0.31246	9.95378		2	58	32	31	26	25	24	7	6	5
		26		32			6										
59	9.64158		9.68786		0.31214	9.95372		1	59	32	31	27	26	25	7	6	5
		26		32			6										
60	9.64184		9.68818		0.31182	9.95366		0	60	33	32	27	26	25	7	6	5
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.							

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.							
										32	31	30	26	25	24	7	6
0	9.64184	26	9.68818	32	0.31182	9.95366	6	60									
1	9.64210	26	9.68850	32	0.31150	9.95360	6	59	1	1	1	0	0	0	0	0	0
2	9.64236	26	9.68882	32	0.31118	9.95354	6	58	2	1	1	1	1	1	1	0	0
3	9.64262	26	9.68914	32	0.31086	9.95348	7	57	3	2	2	1	1	1	1	0	0
4	9.64288	25	9.68946	32	0.31054	9.95341	6	56	4	2	2	2	2	2	2	0	0
5	9.64313	26	9.68978	32	0.31022	9.95335	6	55	5	3	3	2	2	2	2	1	0
6	9.64339	26	9.69010	32	0.30990	9.95329	6	54	6	3	3	3	3	2	2	1	1
7	9.64365	26	9.69042	32	0.30958	9.95323	6	53	7	4	4	3	3	3	3	1	1
8	9.64391	26	9.69074	32	0.30926	9.95317	7	52	8	4	4	4	3	3	3	1	1
9	9.64417	25	9.69106	32	0.30894	9.95310	6	51	9	5	5	4	4	4	4	1	1
10	9.64442	26	9.69138	32	0.30862	9.95304	6	50	10	5	5	5	4	4	4	1	1
11	9.64468	26	9.69170	32	0.30830	9.95298	6	49	11	6	6	5	5	5	4	1	1
12	9.64494	25	9.69202	32	0.30798	9.95292	6	48	12	6	6	6	5	5	5	1	1
13	9.64519	26	9.69234	32	0.30766	9.95286	7	47	13	7	7	6	6	5	5	2	1
14	9.64545	26	9.69266	32	0.30734	9.95279	6	46	14	7	7	7	6	6	6	2	1
15	9.64571	25	9.69298	31	0.30702	9.95273	6	45	15	8	8	7	6	6	6	2	1
16	9.64596	26	9.69329	32	0.30671	9.95267	6	44	16	9	8	8	7	7	6	2	2
17	9.64622	25	9.69361	32	0.30639	9.95261	7	43	17	9	9	8	7	7	7	2	2
18	9.64647	26	9.69393	32	0.30607	9.95254	6	42	18	10	9	9	8	7	7	2	2
19	9.64673	25	9.69425	32	0.30575	9.95248	6	41	19	10	10	9	8	8	8	2	2
20	9.64698	26	9.69457	31	0.30543	9.95242	6	40	20	11	10	10	9	8	8	2	2
21	9.64724	25	9.69488	32	0.30512	9.95236	7	39	21	11	11	10	9	9	8	2	2
22	9.64749	26	9.69520	32	0.30480	9.95229	6	38	22	12	11	11	10	9	9	3	2
23	9.64775	25	9.69552	32	0.30448	9.95223	6	37	23	12	12	11	10	10	9	3	2
24	9.64800	26	9.69584	31	0.30416	9.95217	6	36	24	13	12	12	10	10	10	3	2
25	9.64826	25	9.69615	32	0.30385	9.95211	7	35	25	13	13	12	11	10	10	3	2
26	9.64851	26	9.69647	32	0.30353	9.95204	6	34	26	14	13	13	11	11	10	3	3
27	9.64877	25	9.69679	31	0.30321	9.95198	6	33	27	14	14	13	12	11	11	3	3
28	9.64902	25	9.69710	32	0.30290	9.95192	7	32	28	15	14	14	12	12	11	3	3
29	9.64927	26	9.69742	32	0.30258	9.95185	6	31	29	15	15	14	13	12	12	3	3
30	9.64953	25	9.69774	31	0.30226	9.95179	6	30	30	16	15	15	13	12	12	3	3
31	9.64978	25	9.69805	32	0.30195	9.95173	6	29	31	17	16	15	13	13	12	4	3
32	9.65003	26	9.69837	31	0.30163	9.95167	7	28	32	17	17	16	14	13	13	4	3
33	9.65029	25	9.69868	32	0.30132	9.95160	6	27	33	18	17	16	14	14	13	4	3
34	9.65054	25	9.69900	32	0.30100	9.95154	6	26	34	18	18	17	15	14	14	4	3
35	9.65079	25	9.69932	31	0.30068	9.95148	7	25	35	19	18	17	15	15	14	4	3
36	9.65104	26	9.69963	32	0.30037	9.95141	6	24	36	19	19	18	16	15	14	4	4
37	9.65130	25	9.69995	31	0.30005	9.95135	6	23	37	20	19	18	16	15	15	4	4
38	9.65155	25	9.70026	32	0.29974	9.95129	7	22	38	20	20	19	16	16	15	4	4
39	9.65180	25	9.70058	31	0.29942	9.95122	6	21	39	21	20	19	17	16	16	5	4
40	9.65205	25	9.70089	32	0.29911	9.95116	6	20	40	21	21	20	17	17	16	5	4
41	9.65230	25	9.70121	31	0.29879	9.95110	7	19	41	22	21	20	18	17	16	5	4
42	9.65255	26	9.70152	32	0.29848	9.95103	6	18	42	22	22	21	18	17	17	5	4
43	9.65281	25	9.70184	31	0.29816	9.95097	7	17	43	23	22	21	19	18	17	5	4
44	9.65306	25	9.70215	32	0.29785	9.95090	6	16	44	23	23	22	19	18	18	5	4
45	9.65331	25	9.70247	31	0.29753	9.95084	6	15	45	24	23	22	19	19	18	5	4
46	9.65356	25	9.70278	31	0.29722	9.95078	7	14	46	25	24	23	20	19	18	5	5
47	9.65381	25	9.70309	32	0.29691	9.95071	6	13	47	25	24	23	20	20	19	5	5
48	9.65406	25	9.70341	31	0.29659	9.95065	6	12	48	26	25	24	21	20	19	5	5
49	9.65431	25	9.70372	32	0.29628	9.95059	7	11	49	26	25	24	21	20	20	6	5
50	9.65456	25	9.70404	31	0.29596	9.95052	6	10	50	27	26	25	22	21	20	6	5
51	9.65481	25	9.70435	31	0.29565	9.95046	7	9	51	27	26	25	22	21	20	6	5
52	9.65506	25	9.70466	32	0.29534	9.95039	6	8	52	28	27	26	23	22	21	6	5
53	9.65531	25	9.70498	31	0.29502	9.95033	6	7	53	28	27	26	23	22	21	6	5
54	9.65556	24	9.70529	31	0.29471	9.95027	7	6	54	29	28	27	23	22	22	6	5
55	9.65580	25	9.70560	32	0.29440	9.95020	6	5	55	29	28	27	24	23	22	6	5
56	9.65605	25	9.70592	31	0.29408	9.95014	7	4	56	30	29	28	24	23	22	7	6
57	9.65630	25	9.70623	31	0.29377	9.95007	6	3	57	30	29	28	25	24	23	7	6
58	9.65655	25	9.70654	31	0.29346	9.95001	6	2	58	31	30	29	25	24	23	7	6
59	9.65680	25	9.70685	32	0.29315	9.94995	7	1	59	31	30	29	26	25	24	7	6
60	9.65705		9.70717		0.29283	9.94988		0	60	32	31	30	26	25	24	7	6
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.							

′	Sin	d.	Tang	d.c	Cotg	Cos	d.	′	″	P. P.							
										31	31	30	25	24	23	7	6
0	9.65705		9.70717		0.29283	9.94988		60									
		24		31			6										
1	9.65729		9.70748		0.29252	9.94982		59	1	1	1	0	0	0	0	0	0
		25		31			7										
2	9.65754		9.70779		0.29221	9.94975		58	2	1	1	1	1	1	1	0	0
		25		31			6										
3	9.65779		9.70810		0.29190	9.94969		57	3	2	2	1	1	1	1	0	0
		25		31			7										
4	9.65804		9.70841		0.29159	9.94962		56	4	2	2	2	2	2	2	0	0
		24		32			6										
5	9.65828		9.70873		0.29127	9.94956		55	5	3	3	2	2	2	2	1	0
		25		31			7										
6	9.65853		9.70904		0.29096	9.94949		54	6	3	3	3	2	2	2	1	1
		25		31			6										
7	9.65878		9.70935		0.29065	9.94943		53	7	4	4	3	3	3	3	1	1
		24		31			7										
8	9.65902		9.70966		0.29034	9.94936		52	8	4	4	4	3	3	3	1	1
		25		31			6										
9	9.65927		9.70997		0.29003	9.94930		51	9	5	5	4	4	4	3	1	1
		25		31			7										
10	9.65952		9.71028		0.28972	9.94923		50	10	5	5	5	4	4	4	1	1
		24		31			6										
11	9.65976		9.71059		0.28941	9.94917		49	11	6	6	5	5	4	4	1	1
		25		31			6										
12	9.66001		9.71090		0.28910	9.94911		48	12	6	6	6	5	5	5	1	1
		24		31			7										
13	9.66025		9.71121		0.28879	9.94904		47	13	7	7	6	5	5	5	2	1
		25		32			6										
14	9.66050		9.71153		0.28847	9.94898		46	14	7	7	7	6	6	5	2	1
		25		31			7										
15	9.66075		9.71184		0.28816	9.94891		45	15	8	8	7	6	6	6	2	1
		24		31			6										
16	9.66099		9.71215		0.28785	9.94885		44	16	9	8	8	7	6	6	2	2
		25		31			7										
17	9.66124		9.71246		0.28754	9.94878		43	17	9	9	8	7	7	7	2	2
		24		31			7										
18	9.66148		9.71277		0.28723	9.94871		42	18	10	9	9	7	7	7	2	2
		25		31			6										
19	9.66173		9.71308		0.28692	9.94865		41	19	10	10	9	8	8	7	2	2
		24		31			7										
20	9.66197		9.71339		0.28661	9.94858		40	20	11	10	10	8	8	8	2	2
		24		31			6										
21	9.66221		9.71370		0.28630	9.94852		39	21	11	11	10	9	8	8	2	2
		25		31			7										
22	9.66246		9.71401		0.28599	9.94845		38	22	12	11	11	9	9	8	3	2
		24		30			6										
23	9.66270		9.71431		0.28569	9.94839		37	23	12	12	11	10	9	9	3	2
		25		31			7										
24	9.66295		9.71462		0.28538	9.94832		36	24	13	12	12	10	10	9	3	2
		24		31			6										
25	9.66319		9.71493		0.28507	9.94826		35	25	13	13	12	10	10	10	3	2
		24		31			7										
26	9.66343		9.71524		0.28476	9.94819		34	26	14	13	13	11	10	10	3	3
		25		31			6										
27	9.66368		9.71555		0.28445	9.94813		33	27	14	14	13	11	11	10	3	3
		24		31			7										
28	9.66392		9.71586		0.28414	9.94806		32	28	15	14	14	12	11	11	3	3
		24		31			7										
29	9.66416		9.71617		0.28383	9.94799		31	29	15	15	14	12	12	11	3	3
		25		31			6										
30	9.66441		9.71648		0.28352	9.94793		30	30	16	15	15	12	12	11	3	3
		24		31			7										
31	9.66465		9.71679		0.28321	9.94786		29	31	17	16	15	13	12	12	4	3
		24		30			6										
32	9.66489		9.71709		0.28291	9.94780		28	32	17	17	16	13	13	12	4	3
		24		31			7										
33	9.66513		9.71740		0.28260	9.94773		27	33	18	17	16	14	13	13	4	3
		24		31			6										
34	9.66537		9.71771		0.28229	9.94767		26	34	18	18	17	14	14	13	4	3
		25		31			7										
35	9.66562		9.71802		0.28198	9.94760		25	35	19	18	17	15	14	13	4	3
		24		31			7										
36	9.66586		9.71833		0.28167	9.94753		24	36	19	19	18	15	14	14	4	4
		24		30			6										
37	9.66610		9.71863		0.28137	9.94747		23	37	20	19	18	15	15	14	4	4
		24		31			7										
38	9.66634		9.71894		0.28106	9.94740		22	38	20	20	19	16	15	15	4	4
		24		31			6										
39	9.66658		9.71925		0.28075	9.94734		21	39	21	20	19	16	16	15	5	4
		24		30			7										
40	9.66682		9.71955		0.28045	9.94727		20	40	21	21	20	17	16	15	5	4
		24		31			7										
41	9.66706		9.71986		0.28014	9.94720		19	41	22	21	20	17	16	16	5	4
		24		31			6										
42	9.66731		9.72017		0.27983	9.94714		18	42	22	22	21	17	17	16	5	4
		25		31			7										
43	9.66755		9.72048		0.27952	9.94707		17	43	23	22	21	18	17	16	5	4
		24		30			7										
44	9.66779		9.72078		0.27922	9.94700		16	44	23	23	22	18	18	17	5	4
		24		31			6										
45	9.66803		9.72109		0.27891	9.94694		15	45	24	23	22	19	18	17	5	4
		24		31			7										
46	9.66827		9.72140		0.27860	9.94687		14	46	25	24	23	19	18	18	5	5
		24		30			7										
47	9.66851		9.72170		0.27830	9.94680		13	47	25	24	23	20	19	18	5	5
		24		31			6										
48	9.66875		9.72201		0.27799	9.94674		12	48	26	25	24	20	19	18	6	5
		24		30			7										
49	9.66899		9.72231		0.27769	9.94667		11	49	26	25	24	20	20	19	6	5
		24		31			7										
50	9.66922		9.72262		0.27738	9.94660		10	50	27	26	25	21	20	19	6	5
		24		31			6										
51	9.66946		9.72293		0.27707	9.94654		9	51	27	26	25	21	20	20	6	5
		23		30			7										
52	9.66970		9.72323		0.27677	9.94647		8	52	28	27	26	22	21	20	6	5
		24		31			7										
53	9.66994		9.72354		0.27646	9.94640		7	53	28	27	26	22	21	20	6	5
		24		30			6										
54	9.67018		9.72384		0.27616	9.94634		6	54	29	28	27	22	22	21	6	5
		24		31			7										
55	9.67042		9.72415		0.27585	9.94627		5	55	29	28	27	23	22	21	6	5
		24		30			7										
56	9.67066		9.72445		0.27555	9.94620		4	56	30	29	28	23	22	21	7	6
		24		31			6										
57	9.67090		9.72476		0.27524	9.94614		3	57	30	29	28	24	23	22	7	6
		23		30			7										
58	9.67113		9.72506		0.27494	9.94607		2	58	31	30	29	24	23	22	7	6
		24		31			7										
59	9.67137		9.72537		0.27463	9.94600		1	59	31	30	29	25	24	23	7	6
		24		30			7										
60	9.67161		9.72567		0.27433	9.94593		0	60	32	31	30	25	24	23	7	6
′	Cos	d.	Cotg	d.c	Tang	Sin	d.	′	″	P. P.							

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.							
										31	30	29	28	27	26	7	6
0	9.67161	24	9.72567	31	0 27433	9.94593	6	60									
1	9.67185	23	9.72598	30	0.27402	9.94587	7	59	1	1	0	0	0	0	0	0	0
2	9.67208	24	9.72628	31	0.27372	9.94580	7	58	2	1	1	1	1	1	1	0	0
3	9.67232	24	9.72659	30	0.27341	9.94573	6	57	3	2	1	1	1	1	1	0	0
4	9.67256	24	9.72689	31	0.27311	9.94567	7	56	4	2	2	2	2	2	1	0	0
5	9.67280	23	9.72720	30	0.27280	9.94560	7	55	5	3	2	2	2	2	2	1	0
6	9.67303	24	9.72750	30	0.27250	9.94553	7	54	6	3	3	3	2	2	2	1	1
7	9.67327	23	9.72780	31	0.27220	9.94546	6	53	7	4	3	3	3	3	3	1	1
8	9.67350	24	9.72811	30	0.27189	9.94540	7	52	8	4	4	4	3	3	3	1	1
9	9.67374	24	9 72841	31	0.27159	9.94533	7	51	9	5	4	4	4	3	3	1	1
10	9.67398	23	9.72872	30	0.27128	9.94526	7	50	10	5	5	5	4	4	4	1	1
11	9.67421	24	9.72902	30	0.27098	9.94519	6	49	11	6	5	5	4	4	4	1	1
12	9.67445	23	9.72932	31	0.27068	9.94513	7	48	12	6	6	6	5	5	4	1	1
13	9.67468	24	9.72963	30	0.27037	9.94506	7	47	13	7	6	6	5	5	5	2	1
14	9.67492	23	9.72993	30	0.27007	9.94499	7	46	14	7	7	7	6	5	5	2	1
15	9.67515	24	9.73023	31	0.26977	9.94492	7	45	15	8	7	7	6	6	5	2	1
16	9.67539	23	9.73054	30	0.26946	9.94485	6	44	16	8	8	8	6	6	6	2	2
17	9 67562	24	9.73084	30	0.26916	9.94479	7	43	17	9	8	8	7	7	6	2	2
18	9.67586	23	9.73114	30	0.26886	9.94472	7	42	18	9	9	9	7	7	7	2	2
19	9.67609	24	9.73144	31	0.26856	9.94465	7	41	19	10	9	9	8	7	7	2	2
20	9.67633	23	9.73175	30	0.26825	9.94458	7	40	20	10	10	10	8	8	7	2	2
21	9.67656	24	9.73205	30	0.26795	9.94451	6	39	21	11	10	10	8	8	8	2	2
22	9.67680	22	9.73235	30	0·26765	9.94445	7	38	22	11	11	11	9	8	8	3	2
23	9.67703	23	9.73265	30	0.26735	9.94438	7	37	23	12	11	11	9	9	8	3	2
24	9.67726	24	9.73295	31	0.26705	9.94431	7	36	24	12	12	12	10	9	9	3	2
25	9.67750	23	9.73326	30	0.26674	9.94424	7	35	25	13	12	12	10	10	9	3	2
26	9.67773	23	9.73356	30	0.26644	9.94417	7	34	26	13	13	13	10	10	10	3	3
27	9.67796	24	9.73386	30	0 26614	9.94410	6	33	27	14	13	13	11	10	10	3	3
28	9.67820	23	9.73416	30	0.26584	9.94404	7	32	28	14	14	14	11	11	10	3	3
29	9.67843	23	9.73446	30	0.26554	9.94397	7	31	29	15	14	14	12	11	11	3	3
30	9.67866	24	9.73476	31	0.26524	9.94390	7	30	30	15	15	14	12	11	11	3	3
31	9.67890	23	9·73507	30	0.26493	9.94383	7	29	31	16	15	15	12	12	11	4	3
32	9 67913	23	9.73537	30	0.26463	9.94376	7	28	32	17	16	15	13	12	12	4	3
33	9.67936	23	9.73567	30	0.26433	9.94369	7	27	33	17	16	16	13	13	12	4	3
34	9.67959	23	9.73597	30	0.26403	9.94362	7	26	34	18	17	16	14	13	12	4	3
35	9.67982	23	9.73627	30	0.26373	9.94355	6	25	35	18	17	17	14	13	13	4	3
36	9 68006	24	9.73657	30	0.26343	9.94349	7	24	36	19	18	17	14	14	13	4	4
37	9.68029	23	9.73687	30	0.26313	9.94342	7	23	37	19	18	18	15	14	14	4	4
38	9.68052	23	9.73717	30	0.26283	9.94335	7	22	38	20	19	18	15	15	14	4	4
39	9.68075	23	9.73747	30	0.26253	9.94328	7	21	39	20	19	19	16	15	14	5	4
40	9.68098	23	9.73777	30	0.26223	9.94321	7	20	40	21	20	19	16	15	15	5	4
41	9.68121	23	9.73807	30	0.26193	9.94314	7	19	41	21	20	20	16	16	15	5	4
42	9.68144	23	9.73837	30	0.26163	9.94307	7	18	42	22	21	20	17	16	15	5	4
43	9.68167	23	9.73867	30	0.26133	9.94300	7	17	43	22	21	21	17	16	16	5	4
44	9.68190	23	9.73897	30	0.26103	9.94293	7	16	44	23	22	21	18	17	16	5	4
45	9.68213	24	9.73927	30	0.26073	9.94286	7	15	45	23	22	22	18	17	16	5	4
46	9.68237	24	9.73957	30	0.26043	9 94279	6	14	46	24	23	22	18	18	17	5	5
47	9.68260	23	9.73987	30	0.26013	9.94273	7	13	47	24	23	23	19	18	17	5	5
48	9.68283	22	9.74017	30	0.25983	9.94266	7	12	48	25	24	23	19	18	18	6	5
49	9.68305	23	9.74047	30	0.25953	9.94259	7	11	49	25	24	24	20	19	18	6	5
50	9.68328	23	9.74077	30	0.25923	9.94252	7	10	50	26	25	24	20	19	18	6	5
51	9.68351	23	9.74107	30	0 25893	9.94245	7	9	51	26	25	25	20	20	19	6	5
52	9.68374	23	9.74137	29	0.25863	9.94238	7	8	52	27	26	25	21	20	19	6	5
53	9.68397	23	9.74166	30	0.25834	9.94231	7	7	53	27	26	26	21	20	19	6	5
54	9.68420	23	9.74196	30	0.25804	9.94224	7	6	54	28	27	26	22	21	20	6	5
55	9.68443	23	9.74226	30	0.25774	9.94217	7	5	55	28	27	27	22	21	20	6	5
56	9.68466	23	9.74256	30	0.25744	9 94210	7	4	56	29	28	27	22	21	21	7	6
57	9.68489	23	9.74286	30	0.25714	9.94203	7	3	57	29	28	28	23	22	21	7	6
58	9.68512	22	9.74316	29	0.25684	9.94196	7	2	58	30	29	28	23	22	21	7	6
59	9.68534	23	9.74345	30	0.25655	9.94189	7	1	59	30	29	29	24	23	22	7	6
60	9.68557		9.74375		0.25625	9.94182		0	60	31	30	29	24	23	22	7	6
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.							

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.							
										30	29	28	23	26	21	8	7
0	9.68557	23	9.74375	30	0.25625	9 94182	7	60									
1	9.68580	23	9.74405	30	0.25595	9.94175	7	59	1	0	0	0	0	0	0	0	0
2	9.68603	22	9.74435	30	0.25565	9.94168	7	58	2	1	1	1	1	1	1	0	0
3	9.68625	23	9.74465	29	0.25535	9.94161	7	57	3	1	1	1	1	1	1	0	0
4	9.68648	23	9.74494	30	0.25506	9.94154	7	56	4	2	2	2	2	1	1	1	0
5	9.68671	23	9.74524	30	0.25476	9.94147	7	55	5	2	2	2	2	2	2	1	1
6	9.68694	22	9.74554	29	0.25446	9.94140	7	54	6	3	3	3	2	2	2	1	1
7	9.68716	23	9,74583	30	0 25417	9.94133	7	53	7	3	3	3	3	3	2	1	1
8	9.68739	23	9.74613	30	0.25387	9.94126	7	52	8	4	4	4	3	3	3	1	1
9	9.68762	22	9.74643	30	0.25357	9.94119	7	51	9	4	4	4	3	3	3	1	1
10	9.68784	23	9.74673	29	0.25327	9.94112	7	50	10	5	5	5	4	4	3	1	1
11	9.68807	22	9.74702	30	0.25298	9.94105	7	49	11	5	5	5	4	4	4	1	1
12	9,68829	23	9.74732	30	0.25268	9.94098	8	48	12	6	6	6	5	4	4	2	1
13	9.68852	23	9.74762	29	0.25238	9.94090	7	47	13	6	6	6	5	5	5	2	2
14	9.68875	22	9.74791	30	0.25209	9.94083	7	46	14	7	7	7	5	5	5	2	2
15	9.68897	23	9.74821	30	0.25179	9.94076	7	45	15	7	7	7	6	5	5	2	2
16	9.68920	22	9.74851	29	0.25149	9.94069	7	44	16	8	8	7	6	6	6	2	2
17	9 68942	23	9.74880	30	0.25120	9.94062	7	43	17	8	8	8	7	6	6	2	2
18	9.68965	22	9.74910	29	0.25090	9.94055	7	42	18	9	9	8	7	7	6	2	2
19	9.68987	23	9.74939	30	0.25061	9.94048	7	41	19	9	9	9	7	7	7	3	2
20	9.69010	22	9.74969	29	0.25031	9.94041	7	40	20	10	10	9	8	7	7	3	2
21	9.69032	23	9.74998	30	0.25002	9.94034	7	39	21	10	10	10	8	8	7	3	2
22	9.69055	22	9.75028	30	0.24972	9.94027	7	38	22	11	11	10	8	8	8	3	3
23	9.69077	23	9 75058	29	0 24942	9.94020	8	37	23	11	11	11	9	8	8	3	3
24	9.69100	23	9.75087	30	0.24913	9.94012	7	36	24	12	12	11	9	9	8	3	3
25	9.69122	22	9.75117	29	0.24883	9.94005	7	35	25	12	12	12	10	9	9	3	3
26	9.69144	23	9.75146	30	0.24854	9.93998	7	34	26	13	13	12	10	10	9	3	3
27	9.69167	22	9.75176	29	0.24824	9.93991	7	33	27	13	13	13	10	10	9	4	3
28	9.69189	23	9.75205	30	0.24795	9.93984	7	32	28	14	14	13	11	10	10	4	3
29	9.69212	22	9.75235	29	0.24765	9.93977	7	31	29	14	14	14	11	11	10	4	3
30	9.69234	22	9.75264	30	0.24736	9.93970	7	30	30	15	14	14	11	11	10	4	3
31	9.69256	23	9.75294	29	0.24706	9.93963	8	29	31	15	15	14	12	11	11	4	4
32	9.69279	22	9.75323	30	0.24677	9.93955	7	28	32	16	15	15	12	12	11	4	4
33	9.69301	22	9.75353	29	0.24647	9.93948	7	27	33	16	16	15	13	12	12	4	4
34	9.69323	22	9.75382	29	0.24618	9.93941	7	26	34	17	16	16	13	12	12	5	4
35	9.69345	23	9.75411	30	0.24589	9.93934	7	25	35	17	17	16	13	13	12	5	4
36	9.69368	22	9.75441	29	0.24559	9.93927	7	24	36	18	17	17	14	13	13	5	4
37	9.69390	22	9.75470	30	0.24530	9.93920	8	23	37	18	18	17	14	14	13	5	4
38	9.69412	22	9.75500	29	0.24500	9.93912	7	22	38	19	18	18	15	14	13	5	4
39	9.69434	22	9.75529	29	0.24471	9.93905	7	21	39	19	19	18	15	14	14	5	5
40	9.69456	23	9.75558	30	0.24442	9.93898	7	20	40	20	19	19	15	15	14	5	5
41	9.69479	22	9.75588	29	0.24412	9.93891	7	19	41	20	20	19	16	15	14	5	5
42	9.69501	22	9.75617	30	0.24383	9.93884	8	18	42	21	20	20	16	15	15	6	5
43	9.69523	22	9.75647	29	0.24353	9.93876	7	17	43	21	21	20	16	16	15	6	5
44	9.69545	22	9.75676	29	0.24324	9.93869	7	16	44	22	21	21	17	16	15	6	5
45	9.69567	22	9.75705	30	0.24295	9.93862	7	15	45	22	22	21	17	16	16	6	5
46	9.69589	22	9.75735	29	0.24265	9.93855	8	14	46	23	22	21	18	17	16	6	5
47	9.69611	22	9.75764	29	0.24236	9.93847	7	13	47	23	23	22	18	17	16	6	5
48	9.69633	22	9.75793	29	0.24207	9.93840	7	12	48	24	23	22	18	18	17	6	6
49	9.69655	22	9.75822	30	0.24178	9.93833	7	11	49	24	24	23	19	18	17	7	6
50	9.69677	22	9.75852	29	0.24148	9.93826	7	10	50	25	24	23	19	18	17	7	6
51	9.69699	22	9.75881	29	0.24119	9 93819	8	9	51	25	25	24	20	19	18	7	6
52	9.69721	22	9.75910	29	0.24090	9.93811	7	8	52	26	25	24	20	19	18	7	6
53	9.69743	22	9.75939	30	0.24061	9.93804	7	7	53	26	26	25	20	19	19	7	6
54	9.69765	22	9.75969	29	0.24031	9.93797	8	6	54	27	26	25	21	20	19	7	6
55	9.69787	22	9.75998	29	0.24002	9.93789	7	5	55	27	27	26	21	20	19	7	6
56	9.69809	22	9.76027	29	0.23973	9.93782	7	4	56	28	27	26	21	21	20	7	7
57	9.69831	22	9.76056	30	0.23944	9.93775	7	3	57	28	28	27	22	21	20	8	7
58	9.69853	22	9.76086	29	0.23914	9.93768	8	2	58	29	28	27	22	21	20	8	7
59	9.69875	22	9.76115	29	0.23885	9.93760	7	1	59	29	29	28	23	22	21	8	7
60	9.69897		9.76144		0.23856	9.93753		0	60	30	29	28	23	22	21	8	7
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.							

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.							
										30	29	28	22	21	10	8	7
0	9.69897		9.76144		0.23856	9.93753		60									
1	9.69919	22	9.76173	29	0.23827	9.93746	7	59	1	0	0	0	0	0	0	0	0
2	9.69941	22	9.76202	29	0.23798	9.93738	8	58	2	1	1	1	1	1	1	0	0
3	9.69963	22	9.76231	29	0.23769	9.93731	7	57	3	1	1	1	1	1	1	0	0
4	9.69984	21	9.76261	30	0.23739	9.93724	7	56	4	2	2	2	1	1	1	1	0
		22		29			7										
5	9.70006		9.76290		0.23710	9 93717		55	5	2	2	2	2	2	2	1	1
6	9.70028	22	9.76319	29	0.23681	9.93709	8	54	6	3	3	3	2	2	2	1	1
7	9.70050	22	9.76348	29	0.23652	9.93702	7	53	7	3	3	3	3	2	2	1	1
8	9.70072	22	9.76377	29	0.23623	9.93695	7	52	8	4	4	4	3	3	3	1	1
9	9.70093	21	9.76406	29	0 23594	9.93687	8	51	9	4	4	4	3	3	3	1	1
		22		29			7										
10	9.70115		9.76435		0.23565	9.93680		50	10	5	5	5	4	3	3	1	1
11	9.70137	22	9.76464	29	0.23536	9 93673	7	49	11	5	5	5	4	4	4	1	1
12	9.70159	22	9.76493	29	0.23507	9.93665	8	48	12	6	6	6	4	4	4	2	1
13	9.70180	21	9.76522	29	0.23478	9.9.658	7	47	13	6	6	6	5	5	4	2	2
14	9.70202	22	9.76551	29	0.23449	9.93650	8	46	14	7	7	7	5	5	5	2	2
		22		29			7										
15	9.70224		9.76580		0.23420	9.93643		45	15	7	7	7	5	5	5	2	2
16	9.70245	21	9.76609	29	0.23391	9.93636	7	44	16	8	8	7	6	6	5	2	2
17	9.70267	22	9.76639	30	0.23361	9.93628	8	43	17	8	8	8	6	6	6	2	2
18	9.70288	21	9.76668	29	0.23332	9.93621	7	42	18	9	9	8	7	6	6	2	2
19	9.70310	22	9.76697	29	0.23303	9.93614	7	41	19	9	9	9	7	7	6	3	2
		22		28			8										
20	9.70332		9.76725		0.23275	9.93606		40	20	10	10	9	7	7	7	3	2
21	9.70353	21	9.76754	29	0.23246	9.93599	7	39	21	10	10	10	8	7	7	3	2
22	9.70375	22	9.76783	29	0.23217	9.93591	8	38	22	11	11	10	8	8	7	3	3
23	9.70396	21	9.76812	29	0.23188	9 93584	7	37	23	11	11	11	8	8	8	3	3
24	9.70418	22	9.76841	29	0.23159	9.93577	7	36	24	12	12	11	9	8	8	3	3
		21		29			8										
25	9 70439		9.76870		0.23130	9.93569		35	25	12	12	12	9	9	8	3	3
26	9.70461	22	9.76899	29	0.23101	9.93562	7	34	26	13	13	12	10	9	9	3	3
27	9.70482	21	9.76928	29	0 23072	9.93554	8	33	27	13	13	13	10	9	9	4	3
28	9.70504	22	9.76957	29	0.23043	9.93547	7	32	28	14	14	13	10	10	9	4	3
29	9.70525	21	9.76986	29	0.23014	9.93539	8	31	29	14	14	14	11	10	10	4	3
		22		29			7										
30	9.70547		9.77015		0.22985	9.93532		30	30	15	14	14	11	10	10	4	3
31	9.70568	21	9.77044	29	0.22956	9.93525	7	29	31	15	15	14	11	11	10	4	4
32	9.70590	22	9.77073	29	0.22927	9.93517	8	28	32	16	15	15	12	11	11	4	4
33	9.70611	21	9.77101	28	0.22899	9.93510	7	27	33	16	16	15	12	12	11	4	4
34	9.70633	22	9.77130	29	0 22870	9.93502	8	26	34	17	16	16	12	12	11	5	4
		21		29			7										
35	9.70654		9.77159		0.22841	9.93495		25	35	17	17	16	13	12	12	5	4
36	9.70675	21	9.77188	29	0 22812	9.93487	8	24	36	18	17	17	13	13	12	5	4
37	9.70697	22	9.77217	29	0.22783	9.93480	7	33	37	18	18	17	14	13	12	5	4
38	9.70718	21	9.77246	29	0.22754	9.93472	8	22	38	19	18	18	14	13	13	5	4
39	9.70739	21	9.77274	28	0 22726	9.93465	7	21	39	19	19	18	14	14	13	5	5
		22		29			8										
40	9.70761		9.77303		0.22697	9.93457		20	40	20	19	19	15	14	13	5	5
41	9.70782	21	9.77332	29	0.22668	9.93450	7	19	41	20	20	19	15	14	14	5	5
42	9.70803	21	9.77361	29	0 22639	9.93442	8	18	42	21	20	20	15	15	14	6	5
43	9.70824	21	9.77390	29	0 22610	9.93435	7	17	43	21	21	20	16	15	14	6	5
44	9.70846	22	9.77418	28	0.22582	9.93427	8	16	44	22	21	21	16	15	15	6	5
		21		29			7										
45	9.70867		9.77447		0.22553	9.93420		15	45	22	22	21	16	16	15	6	5
46	9.70888	21	9.77476	29	0.22524	9.93412	8	14	46	23	22	21	17	16	15	6	5
47	9.70909	21	9.77505	29	0.22495	9.93405	7	13	47	23	23	22	17	16	16	6	5
48	9.70931	22	9.77533	28	0.22467	9.93397	8	12	48	24	23	22	18	17	16	6	6
49	9.70952	21	9 77562	29	0.22438	9.93390	7	11	49	24	24	23	18	17	16	7	6
		21		29			8										
50	9.70973		9.77591		0.22409	9.93382		10	50	25	24	23	18	17	17	7	6
51	9.70994	21	9.77619	28	0.22381	9.93375	7	9	51	25	25	24	19	18	17	7	6
52	9.71015	21	9.77648	29	0.22352	9.93367	8	8	52	26	25	24	19	18	17	7	6
53	9.71036	21	9.77677	29	0.22323	9.93360	7	7	53	26	26	25	19	19	18	7	6
54	9.71058	22	9.77706	29	0.22294	9.93352	8	6	54	27	26	25	20	19	18	7	6
		21		28			8										
55	9.71079		9.77734		0 22266	9.93344		5	55	27	27	26	20	19	18	7	6
56	9.71100	21	9.77763	29	0.22237	9.93337	7	4	56	28	27	26	21	20	19	7	7
57	9.71121	21	9.77791	28	0.22209	9.93329	8	3	57	28	28	27	21	20	19	8	7
58	9.71142	21	9.77820	29	0.22180	9.93322	7	2	58	29	28	27	21	20	19	8	7
59	9.71163	21	9.77849	29	0.22151	9.93314	8	1	59	29	29	28	22	21	20	8	7
		21		28			7										
60	9.71184		9.77877		0.22123	9.93307		0	60	30	29	28	22	21	20	8	7
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.							

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.							
										29	28	27	21	20	19	8	7
0	9 71184	21	9.77877	29	0.22123	9.93307	8	60									
1	9.71206	21	9.77906	29	0 22094	9.93299	8	59	1	0	0	0	0	0	0	0	0
2	9.71226	21	9.77935	28	0.22065	9.93291	7	58	2	1	1	1	1	1	1	0	0
3	9.71247	21	9.77963	29	0.22037	9.93284	8	57	3	1	1	1	1	1	1	0	0
4	9.71268	21	9.77992	28	0.22008	9.93276	7	56	4	2	2	2	1	1	1	1	0
5	9.71289	21	9.78020	29	0.21980	9.93269	8	55	5	2	2	2	2	2	2	1	1
6	9.71310	21	9.78049	28	0.21951	9.93261	8	54	6	3	3	3	2	2	2	1	1
7	9.71331	21	9.78077	29	0.21923	9.93253	7	53	7	3	3	3	2	2	2	1	1
8	9.71352	21	9.78106	29	0.21894	9.93246	8	52	8	4	4	4	3	3	3	1	1
9	9.71373	20	9.78135	28	0.21865	9.93238	8	51	9	4	4	4	3	3	3	1	1
10	9.71393	21	9.78163	29	0.21837	9.93230	7	50	10	5	5	4	3	3	3	1	1
11	9.71414	21	9.78192	28	0.21808	9.93223	8	49	11	5	5	5	4	4	3	1	1
12	9.71435	21	9.78220	29	0.21780	9·93215	8	48	12	6	6	5	4	4	4	2	1
13	9.71456	21	9.78249	28	0.21751	9.93207	7	47	13	6	6	6	5	4	4	2	2
14	9.71477	21	9.78277	29	0.21723	9.93200	8	46	14	7	7	6	5	5	4	2	2
15	9.71498	21	9.78306	28	0.21694	9.93192	8	45	15	7	7	7	5	5	5	2	2
16	9.71519	20	9.78334	29	0.21666	9.93184	7	44	16	8	7	7	6	5	5	2	2
17	9.71539	21	9 78363	28	0.21637	9.93177	8	43	17	8	8	8	6	6	5	2	2
18	9.71560	21	9.78391	28	0.21609	9.93169	8	42	18	9	8	8	6	6	6	2	2
19	9.71581	21	9.78419	29	0.21581	9.93161	7	41	19	9	9	9	7	6	6	3	2
20	9.71602	20	9.78448	28	0.21552	9.93154	8	40	20	10	9	9	7	7	6	3	2
21	9.71622	21	9.78476	29	0.21524	9.93146	8	39	21	10	10	9	7	7	7	3	2
22	9.71643	21	9.78505	28	0.21495	9.93138	7	38	22	11	10	10	8	7	7	3	3
23	9.71664	21	9.78533	29	0.21467	9.93131	8	37	23	11	11	10	8	8	7	3	3
24	9.71685	20	9.78562	28	0.21438	9.93123	8	36	24	12	11	11	8	8	8	3	3
25	9.71705	21	9.78590	28	0.21410	9.93115	7	35	25	12	12	11	9	8	8	3	3
26	9.71726	21	9.78618	29	0.21382	9.93108	8	34	26	13	12	12	9	9	8	3	3
27	9.71747	20	9.78647	28	0.21353	9.93100	8	33	27	13	13	12	9	9	9	4	3
28	9.71767	21	9.78675	29	0.21325	9.93092	8	32	28	14	13	13	10	9	9	4	3
29	9.71788	21	9.78704	28	0.21296	9.93084	7	31	29	14	14	13	10	10	9	4	3
30	9.71809	20	9.78732	28	0.21268	9.93077	8	30	30	14	14	13	10	10	9	4	3
31	9.71829	21	9.78760	29	0.21240	9.93069	8	29	31	15	14	14	11	10	10	4	4
32	9.71850	20	9.78789	28	0.21211	9.93061	8	28	32	15	15	14	11	11	10	4	4
33	9.71870	21	9.78817	28	0.21183	9.93053	7	27	33	16	15	15	12	11	10	4	4
34	9.71891	20	9.78845	29	0.21155	9.93046	8	26	34	16	16	15	12	11	11	5	4
35	9.71911	21	9.78874	28	0.21126	9.93038	8	25	35	17	16	16	12	12	11	5	4
36	9.71932	20	9.78902	28	0.21098	9·93030	8	24	36	17	17	16	13	12	11	5	4
37	9.71952	21	9.78930	29	0.21070	9.93022	8	23	37	18	17	17	13	12	12	5	4
38	9.71973	21	9.78959	28	0.21041	9.93014	8	22	38	18	18	17	13	13	12	5	4
39	9.71994	20	9.78987	28	0.21013	9.93007	7	21	39	19	18	18	14	13	12	5	5
40	9.72014	20	9.79015	28	0.20985	9.92999	8	20	40	19	19	18	14	13	13	5	5
41	9.72034	21	9.79043	29	0.20957	9.92991	8	19	41	20	19	18	14	14	13	5	5
42	9.72055	20	9.79072	28	0.20928	9.92983	7	18	42	20	20	19	15	14	13	6	5
43	9.72075	21	9.79100	28	0.20900	9.92976	8	17	43	21	20	19	15	14	14	6	5
44	9.72096	20	9.79128	28	0.20872	9.92968	8	16	44	21	21	20	15	15	14	6	5
45	9.72116	21	9.79156	29	0.20844	9.92960	8	15	45	22	21	20	16	15	14	6	5
46	9.72137	20	9.79185	28	0.20815	9.92952	8	14	46	22	21	21	16	15	15	6	5
47	9.72157	20	9.79213	28	0.20787	9.92944	8	13	47	23	22	21	16	16	15	6	5
48	9.72177	21	9.79241	28	0.20759	9.92936	7	12	48	23	22	22	17	16	15	6	6
49	9.72198	20	9.79269	28	0.20731	9.92929	8	11	49	24	23	22	17	16	16	7	6
50	9.72218	20	9.79297	29	0.20703	9.92921	8	10	50	24	23	22	17	17	16	7	6
51	9.72238	21	9.79326	28	0.20674	9.92913	8	9	51	25	24	23	18	17	16	7	6
52	9.72259	20	9.79354	28	0.20646	9.92905	8	8	52	25	24	23	18	17	16	7	6
53	9.72279	20	9.79382	28	0.20618	9.92897	8	7	53	26	25	24	19	18	17	7	6
54	9.72299	21	9.79410	28	0.20590	9.92889	8	6	54	26	25	24	19	18	17	7	6
55	9.72320	20	9.79438	28	0.20562	9.92881	7	5	55	27	26	25	19	18	17	7	6
56	9.72340	20	9.79466	29	0.20534	9.92874	8	4	56	27	26	25	20	19	18	7	7
57	9.72360	21	9.79495	28	0.20505	9.92866	8	3	57	28	27	26	20	19	18	8	7
58	9.72381	20	9.79523	28	0.20477	9.92858	8	2	58	28	27	26	20	19	18	8	7
59	9.72401	20	9.79551	28	0.20449	9.92850	8	1	59	29	28	27	21	20	19	8	7
60	9.72421		9.79579		0 20421	9.92842		0	60	29	28	27	21	20	19	8	7
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.							

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.							
										29	28	27	24	20	19	9	8
0	9.72421	20	9.79579	28	0.20421	9.92842	8	60									
1	9.72441	20	9.79607	28	0.20393	9.92834	8	59	1	0	0	0	0	0	0	0	0
2	9.72461	21	9.79635	28	0.20365	9.92826	8	58	2	1	1	1	1	1	1	0	0
3	9.72482	20	9.79663	28	0.20337	9.92818	8	57	3	1	1	1	1	1	1	0	0
4	9.72502	20	9.79691	28	0.20309	9.92810	8	56	4	2	2	2	1	1	1	1	1
5	9.72522	20	9.79719	28	0.20281	9.92803	8	55	5	2	2	2	2	2	2	1	1
6	9.72542	20	9.79747	29	0.20253	9.92795	8	54	6	3	3	3	2	2	2	1	1
7	9.72562	20	9.79776	28	0.20224	9.92787	8	53	7	3	3	3	2	2	2	1	1
8	9.72582	20	9.79804	28	0.20196	9.92779	8	52	8	4	4	4	3	3	3	1	1
9	9.72602	20	9.79832	28	0.20168	9.92771	8	51	9	4	4	4	3	3	3	1	1
10	9.72622	21	9.79860	28	0.20140	9.92763	8	50	10	5	5	4	3	3	3	1	1
11	9.72643	20	9.79888	28	0.20112	9.92755	8	49	11	5	5	5	4	4	3	2	1
12	9.72663	20	9.79916	28	0.20084	9.92747	8	48	12	6	6	5	4	4	4	2	2
13	9.72683	20	9.79944	28	0.20056	9.92739	8	47	13	6	6	6	5	4	4	2	2
14	9.72703	20	9.79972	28	0.20028	9.92731	8	46	14	7	7	6	5	5	4	2	2
15	9.72723	20	9.80000	28	0.20000	9.92723	8	45	15	7	7	7	5	5	5	2	2
16	9.72743	20	9.80028	28	0.19972	9.92715	8	44	16	8	7	7	6	5	5	2	2
17	9.72763	20	9.80056	28	0.19944	9.92707	8	43	17	8	8	8	6	6	5	3	2
18	9 72783	20	9.80084	28	0.19916	9.92699	8	42	18	9	8	8	6	6	6	3	2
19	9.72803	20	9.80112	28	0.19888	9.92691	8	41	19	9	9	9	7	6	6	3	3
20	9 72823	20	9.80140	28	0.19860	9.92683	8	40	20	10	9	9	7	7	6	3	3
21	9.72843	20	9.80168	27	0.19832	9.92675	8	39	21	10	10	9	7	7	7	3	3
22	9.72863	20	9.80195	28	0.19805	9.92667	8	38	22	11	10	10	8	7	7	3	3
23	9.72883	19	9.80223	28	0.19777	9.92659	8	37	23	11	11	10	8	8	7	3	3
24	9.72902	20	9.80251	28	0.19749	9 92651	8	36	24	12	11	11	8	8	8	4	3
25	9.72922	20	9.80279	28	0.19721	9.92643	8	35	25	12	12	11	9	8	8	4	3
26	9.72942	20	9.80307	28	0.19693	9.92635	8	34	26	13	12	12	9	9	8	4	3
27	9.72962	20	9.80335	28	0.19665	9.92627	8	33	27	13	13	12	9	9	9	4	4
28	9.72982	20	9.80363	28	0.19637	9.92619	8	32	28	14	13	13	10	9	9	4	4
29	9.73002	20	9.80391	28	0.19609	9.92611	8	31	29	14	14	13	10	10	9	4	4
30	9.73022	19	9.80419	28	0.19581	9.92603	8	30	30	14	14	13	10	10	9	4	4
31	9.73041	20	9.80447	27	0.19553	9.92595	8	29	31	15	14	14	11	10	10	5	4
32	9.73061	20	9.80474	28	0.19526	9.92587	8	28	32	15	15	14	11	11	10	5	4
33	9.73081	20	9.80502	28	0.19498	9.92579	8	27	33	16	15	15	12	11	10	5	4
34	9.73101	20	9.80530	28	0.19470	9.92571	8	26	34	16	16	15	12	11	11	5	5
35	9.73121	19	9.80558	28	0.19442	9.92563	8	25	35	17	16	16	12	12	11	5	5
36	9.73140	20	9.80586	28	0.19414	9.92555	9	24	36	17	17	16	13	12	11	5	5
37	9.73160	20	9.80614	28	0.19386	9.92546	8	23	37	18	17	17	13	12	12	6	5
38	9.73180	20	9.80642	27	0.19358	9.92538	8	22	38	18	18	17	13	13	12	6	5
39	9.73200	19	9.80669	28	0.19331	9.92530	8	21	39	19	18	18	14	13	12	6	5
40	9.73219	20	9.80697	28	0.19303	9.92522	8	20	40	19	19	18	14	13	13	6	5
41	9.73239	20	9.80725	28	0.19275	9.92514	8	19	41	20	19	18	14	14	13	6	5
42	9.73259	19	9.80753	28	0.19247	9.92506	8	18	42	20	20	19	15	14	13	6	6
43	9.73278	20	9.80781	27	0.19219	9.92498	8	17	43	21	20	19	15	14	14	6	6
44	9.73298	20	9.80808	28	0.19192	9.92490	8	16	44	21	21	20	15	15	14	7	6
45	9.73318	19	9.80836	28	0.19164	9.92482	9	15	45	22	21	20	16	15	14	7	6
46	9.73337	20	9.80864	28	0.19136	9.92473	8	14	46	22	21	21	16	15	15	7	6
47	9.73357	20	9.80892	27	0.19108	9.92465	8	13	47	23	22	21	16	16	15	7	6
48	9.73377	19	9.80919	28	0.19081	9 92457	8	12	48	23	22	22	17	16	15	7	6
49	9.73396	20	9.80947	28	0.19053	9.92449	8	11	49	24	23	22	17	16	16	7	7
50	9.73416	19	9.80975	28	0.19025	9.92441	8	10	50	24	23	22	17	17	16	7	7
51	9.73435	20	9.81003	27	0.18997	9.92433	8	9	51	25	24	23	18	17	16	8	7
52	9.73455	19	9.81030	28	0.18970	9.92425	9	8	52	25	24	23	18	17	16	8	7
53	9.73474	20	9.81058	28	0.18942	9.92416	8	7	53	26	25	24	19	18	17	8	7
54	9.73494	19	9.81086	27	0.18914	9.92408	8	6	54	26	25	24	19	18	17	8	7
55	9.73513	20	9.81113	28	0.18887	9.92400	8	5	55	27	26	25	19	18	17	8	7
56	9.73533	19	9.81141	28	0.18859	9.92392	8	4	56	27	26	25	20	19	18	8	7
57	9.73552	20	9.81169	27	0.18831	9.92384	8	3	57	28	27	26	20	19	18	9	8
58	9.73572	19	9.81196	28	0.18804	9.92376	8	2	58	28	27	26	20	19	18	9	8
59	9.73591	20	9.81224	28	0.18776	9.92367	8	1	59	29	28	27	21	20	19	9	8
60	9.73611		9.81252		0.18748	9.92359	8	0	60	29	28	27	21	20	19	9	8
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.							

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.						
										28	21	20	15	14	9	8
0	9.73611		9.81252		0.18748	9.92359		60								
		19		27			8									
1	9.73630		9.81279		0.18721	9.92351		59	1	0	0	0	0	0	0	0
		20		28			8									
2	9.73650		9.81307		0.18693	9.92343		58	2	1	1	1	1	1	0	0
		19		28			8									
3	9.73669		9 81335		0.18665	9.92335		57	3	1	1	1	1	1	0	0
		20		27			9									
4	9.73689		9.81362		0.18638	9.92326		56	4	2	2	1	1	1	1	1
		19		28			8									
5	9.73708		9.81390		0.18610	9.92318		55	5	2	2	2	2	1	1	1
		19		28			8									
6	9.73727		9.81418		0.18582	9.92310		54	6	3	3	2	2	2	1	1
		20		27			8									
7	9.73747		9.81445		0.18555	9.92302		53	7	3	3	2	2	2	1	1
		19		28			9									
8	9.73766		9.81473		0.18527	9.92293		52	8	4	4	3	3	2	1	1
		19		27			8									
9	9.73785		9.81500		0.18500	9.92285		51	9	4	4	3	3	3	1	1
		20		28			8									
10	9.73805		9.81528		0.18472	9.92277		50	10	5	4	3	3	3	1	1
		19		28			8									
11	9.73824		9.81556		0.18444	9.92269		49	11	5	5	4	3	3	2	1
		19		27			9									
12	9.73843		9.81583		0.18417	9.92260		48	12	6	5	4	4	4	2	2
		20		28			8									
13	9.73863		9.81611		0.18389	9.92252		47	13	6	6	4	4	4	2	2
		19		27			8									
14	9.73882		9.81638		0.18362	9.92244		46	14	7	6	5	4	4	2	2
		19		28			9									
15	9.73901		9.81666		0.18334	9 92235		45	15	7	7	5	5	4	2	2
		20		27			8									
16	9.73921		9.81693		0.18307	9.92227		44	16	7	7	5	5	5	2	2
		19		28			8									
17	9.73940		9.81721		0.18279	9.92219		43	17	8	8	6	5	5	3	2
		19		27			8									
18	9.73959		9.81748		0.18252	9.92211		42	18	8	8	6	6	5	3	2
		19		28			9									
19	9.73978		9.81776		0.18224	9.92202		41	19	9	9	6	6	6	3	3
		19		27			8									
20	9 73997		9.81803		0.18197	9.92194		40	20	9	9	7	6	6	3	3
		20		28			8									
21	9.74017		9.81831		0.18169	9.92186		39	21	10	9	7	7	6	3	3
		19		27			9									
22	9.74036		9.81858		0.18142	9.92177		38	22	10	10	7	7	7	3	3
		19		28			8									
23	9.74055		9.81886		0.18114	9.92169		37	23	11	10	8	7	7	3	3
		19		27			8									
24	9.74074		9.81913		0.18087	9.92161		36	24	11	11	8	8	7	4	3
		19		28			9									
25	9.74093		9.81941		0.18059	9.92152		35	25	12	11	8	8	7	4	3
		20		27			8									
26	9.74113		9.81968		0.18032	9.92144		34	26	12	12	9	8	8	4	3
		19		28			8									
27	9.74132		9.81996		0.18004	9.92136		33	27	13	12	9	9	8	4	4
		19		27			9									
28	9,74151		9.82023		0 17977	9,92127		32	28	13	13	9	9	8	4	4
		19		28			8									
29	9.74170		9.82051		0.17940	9.92119		31	29	14	13	10	9	9	4	4
		19		27			8									
30	9,74189		9.82078		0.17922	9.92111		30	30	14	13	10	9	9	4	4
		19		28			9									
31	9.74208		9.82106		0.17894	9.92102		29	31	14	14	10	10	9	5	4
		19		27			8									
32	9.74227		9.82133		0.17867	9 92094		28	32	15	14	11	10	10	5	4
		19		28			8									
33	9.74246		9.82161		0.17839	9.92086		27	33	15	15	11	10	10	5	4
		19		27			9									
34	9.74265		9.82188		0.17812	9.92077		26	34	16	15	11	11	10	5	5
		19		27			8									
35	9.74284		9.82215		0.17785	9.92069		25	35	16	16	12	11	10	5	5
		19		28			9									
36	9.74303		9.82243		0 17757	9 92060		24	36	17	16	12	11	10	5	5
		19		27			8									
37	9.74322		9 82270		0.17730	9.92052		23	37	17	17	12	12	11	6	5
		19		28			8									
38	9.74341		9.82298		0.17702	9.92044		22	38	18	17	13	12	11	6	5
		19		27			9									
39	9.74360		9.82325		0.17675	9.92035		21	39	18	18	13	12	12	6	5
		19		27			8									
40	9.74379		9.82352		0.17648	9.92027		20	40	19	18	13	13	12	6	5
		19		28			9									
41	9.74398		9.82380		0.17620	9.92018		19	41	19	18	14	13	12	6	5
		19		27			8									
42	9.74417		9.82407		0.17593	9.92010		18	42	20	19	14	13	13	6	6
		19		28			8									
43	9 74436		9.82435		0 17565	9.92002		17	43	20	19	14	14	13	6	6
		19		27			9									
44	9.74455		9.82462		0.17538	9.91993		16	44	21	20	15	14	13	7	6
		19		27			8									
45	9 74474		9.82489		0.17511	9.91985		15	45	21	20	15	14	13	7	6
		19		28			9									
46	9.74493		9.82517		0.17483	9.91976		14	46	21	21	15	15	14	7	6
		19		27			8									
47	9.74512		9.82544		0.17456	9.91968		13	47	22	21	16	15	14	7	6
		19		27			9									
48	9.74531		9.82571		0.17429	9.91959		12	48	22	22	16	15	14	7	6
		18		28			8									
49	9.74549		9.82599		0.17401	9.91951		11	49	23	22	16	16	15	7	7
		19		27			9									
50	9.74568		9.82626		0.17374	9 91942		10	50	23	22	17	16	15	7	7
		19		27			8									
51	9.74587		9.82653		0.17347	9.91934		9	51	24	23	17	16	15	8	7
		19		28			9									
52	9.74606		9.82681		0.17319	9.91925		8	52	24	23	17	16	16	8	7
		19		27			8									
53	9.74625		9.82708		0.17292	9.91917		7	53	25	24	18	17	16	8	7
		19		27			9									
54	9.74644		9.82735		0.17265	9.91908		6	54	25	24	18	17	16	8	7
		18		27			8									
55	9.74662		9.82762		0 17238	9.91900		5	55	26	25	18	17	16	8	7
		19		28			9									
56	9.74681		9.82790		0.17210	9.91891		4	56	26	25	19	18	17	8	7
		19		27			8									
57	9.74700		9.82817		0.17183	9.91883		3	57	27	26	19	18	17	9	8
		19		27			9									
58	9.74719		9.82844		0.17156	9.91874		2	58	27	26	19	18	17	9	8
		18		27			8									
59	9.74737		9.82871		0.17129	9.91866		1	59	28	27	20	19	18	9	8
		19		28			9									
60	9.74756		9.82899		0.17101	9.91857		0	60	28	27	20	19	18	9	8
′	Cos	d.	Cotg	d.c	Tang	Sin	d.	′	″	P. P.						

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.						
										28	27	26	19	18	9	8
0	9.74756	19	9.82899	27	0.17101	9.91857	8	60								
1	9.74775	19	9.82926	27	0.17074	9.91849	9	59	1	0	0	0	0	0	0	0
2	9.74794	18	9.82953	27	0.17047	9.91840	8	58	2	1	1	1	1	1	0	0
3	9.74812	19	9.82980	28	0.17020	9.91832	9	57	3	1	1	1	1	1	0	0
4	9.74831	19	9.83008	27	0.16992	9.91823	8	56	4	2	2	2	1	1	1	1
5	9.74850	18	9.83035	27	0.16965	9.91815	9	55	5	2	2	2	2	1	1	1
6	9.74868	19	9.83062	27	0.16938	9.91806	8	54	6	3	3	3	2	2	1	1
7	9.74887	19	9.83089	28	0.16911	9.91798	9	53	7	3	3	3	2	2	1	1
8	9.74906	18	9.83117	27	0.16883	9.91789	8	52	8	4	4	3	3	2	1	1
9	9.74924	19	9.83144	27	0.16856	9.91781	9	51	9	4	4	4	3	3	1	1
10	9.74943	18	9.83171	27	0.16829	9.91772	9	50	10	5	4	4	3	3	1	1
11	9.74961	19	9.83198	27	0.16802	9.91763	8	49	11	5	5	5	3	3	2	1
12	9.74980	19	9.83225	27	0.16775	9.91755	9	48	12	6	5	5	4	4	2	2
13	9.74999	18	9.83252	28	0.16748	9.91746	8	47	13	6	6	6	4	4	2	2
14	9.75017	19	9.83280	27	0.16720	9.91738	9	46	14	7	6	6	4	4	2	2
15	9.75036	18	9 83307	27	0.16693	9.91729	9	45	15	7	7	6	5	4	2	2
16	9.75054	19	9 83334	27	0.16666	9.91720	8	44	16	7	7	7	5	5	2	2
17	9.75073	18	9 83361	27	0.16693	9.91712	9	43	17	8	8	7	5	5	3	2
18	9.75091	19	9.83388	27	0.16612	9.91703	8	42	18	8	8	8	6	5	3	2
19	9.75110	18	9.83415	27	0.16585	9.91695	9	41	19	9	9	8	6	6	3	3
20	9.75128	19	9.83442	28	0.16558	9.91686	9	40	20	9	9	9	6	6	3	3
21	9.75147	18	9.83470	27	0.16530	9.91677	8	39	21	10	9	9	7	6	3	3
22	9.75165	19	9.83497	27	0.16503	9.91669	9	38	22	10	10	10	7	7	3	3
23	9.75184	18	9.83524	27	0.16476	9.91660	9	37	23	11	10	10	7	7	3	3
24	9.75202	19	9.83551	27	0.16449	9.91651	8	36	24	11	11	10	8	7	4	3
25	9.75221	18	9.83578	27	0.16422	9.91643	9	35	25	12	11	11	8	7	4	3
26	9.75239	19	9.83605	27	0.16395	9.91634	9	34	26	12	12	11	8	8	4	3
27	9.75258	18	9.83632	27	0.16368	9.91625	8	33	27	13	12	12	9	8	4	4
28	9.75276	18	9.83659	27	0.16341	9.91617	9	32	28	13	13	12	9	8	4	4
29	9.75294	19	9.83686	27	0.16314	9.91608	9	31	29	14	13	13	9	9	4	4
30	9.75313	18	9.83713	27	0.16287	9.91599	8	30	30	14	13	13	9	9	4	4
31	9.75331	19	9.83740	28	0.16260	9.91591	9	29	31	14	14	13	10	9	5	4
32	9.75350	18	9.83768	27	0.16232	9.91582	9	28	32	15	14	14	10	10	5	4
33	9.75368	18	9.83795	27	0.16205	9.91573	8	27	33	15	15	14	10	10	5	4
34	9.75386	19	9.83822	27	0.16178	9.91565	9	26	34	16	15	15	11	10	5	5
35	9.75405	18	9.83849	27	0.16151	9.91556	9	25	35	16	16	15	11	10	5	5
36	9.75423	18	9.83876	27	0.16124	9.91547	9	24	36	17	16	16	11	11	5	5
37	9.75441	18	9.83903	27	0.16097	9.91538	8	23	37	17	17	16	12	11	6	5
38	9.75459	19	9.83930	27	0.16070	9.91530	9	22	38	18	17	16	12	11	6	5
39	9.75478	18	9.83957	27	0.16043	9.91521	9	21	39	18	18	17	12	12	6	5
40	9.75496	18	9.83984	27	0.16016	9 91512	8	20	40	19	18	17	13	12	6	5
41	9.75514	19	9.84011	27	0.15989	9.91504	9	19	41	19	18	18	13	12	6	5
42	9.75533	18	9.84038	27	0.15962	9.91495	9	18	42	20	19	18	13	13	6	6
43	9.75551	18	9.84065	27	0.15935	9.91486	9	17	43	20	19	19	14	13	6	6
44	9.75569	18	9.84092	27	0.15908	9.91477	8	16	44	21	20	19	14	13	7	6
45	9.75587	18	9.84119	27	0.15881	9.91469	9	15	45	21	20	19	14	13	7	6
46	9.75605	19	9.84146	27	0.15854	9.91460	9	14	46	21	21	20	15	14	7	6
47	9.75624	18	9.84173	27	0.15827	9.91451	9	13	47	22	21	20	15	14	7	6
48	9.75642	18	9.84200	27	0.15800	9.91442	9	12	48	22	22	21	15	14	7	6
49	9.75660	18	9.84227	27	0.15773	9.91433	8	11	49	23	22	21	16	15	7	7
50	9.75678	18	9.84254	26	0.15746	9.91425	9	10	50	23	22	22	16	15	7	7
51	9.75696	18	9.84280	27	0.15720	9.91416	9	9	51	24	23	22	16	15	8	7
52	9.75714	19	9.84307	27	0.15693	9.91407	9	8	52	24	23	23	16	16	8	7
53	9.75733	18	9.84334	27	0.15666	9.91398	9	7	53	25	24	23	17	16	8	7
54	9.75751	18	9.84361	27	0.15639	9.91389	8	6	54	25	24	23	17	16	8	7
55	9.75769	18	9.84388	27	0.15612	9.91381	9	5	55	26	25	24	17	16	8	7
56	9.75787	18	9.84415	27	0.15585	9.91372	9	4	56	26	25	24	18	17	8	7
57	9.75805	18	9.84442	27	0.15558	9.91363	9	3	57	27	26	25	18	17	9	8
58	9.75823	18	9.84469	27	0.15531	9.91354	9	2	58	27	26	25	18	17	9	8
59	9.75841	18	9.84496	27	0.15504	9.91345	9	1	59	28	27	26	19	18	9	8
60	9.75859		9.84523		0.15477	9.91336		0	60	28	27	26	19	18	9	8
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.						

′	Sin	d.	Tang	d c.	Cotg	Cos	d.	′	″	P. P.						
										27	26	18	17	10	9	8
0	9.75859	18	9.84523	27	0.15477	9.91336	8	60								
1	9.75877	18	9.84550	26	0 15450	9.91328	9	59	1	0	0	0	0	0	0	0
2	9.75895	18	9.84576	27	0.15424	9.91319	9	58	2	1	1	1	1	0	0	0
3	9.75913	18	9.84603	27	0.15397	9.91310	9	57	3	1	1	1	1	0	0	0
4	9.75931	18	9.84630	27	0.15370	9.91301	9	56	4	2	2	1	1	1	1	1
5	9.75949	18	9.84657	27	0 15343	9.91292	9	55	5	2	2	1	1	1	1	1
6	9.75967	18	9.84684	27	0.15316	9.91283	9	54	6	3	3	2	2	1	1	1
7	9.75985	18	9.84711	27	0.15289	9.91274	8	53	7	3	3	2	2	1	1	1
8	9.76003	18	9.84738	26	0.15262	9.91266	9	52	8	4	3	2	2	1	1	1
9	9.76021	18	9.84764	27	0.15236	9.91257	9	51	9	4	4	3	3	1	1	1
10	9.76039	18	9.84791	27	0.15209	9.91248	9	50	10	4	4	3	3	2	1	1
11	9 76057	18	9.84818	27	0.15182	9.91239	9	49	11	5	5	3	3	2	2	1
12	9.76075	18	9.84845	27	0.15155	9.91230	9	48	12	5	5	4	3	2	2	2
13	9.76093	18	9.84872	27	0.15128	9.91221	9	47	13	6	6	4	4	2	2	2
14	9.76111	18	9.84899	26	0.15101	9.91212	9	46	14	6	6	4	4	2	2	2
15	9.76129	17	9.84925	27	0.15075	9 91203	9	45	15	7	6	4	4	2	2	2
16	9.76146	18	9.84952	27	0.15048	9.91194	9	44	16	7	7	5	5	3	2	2
17	9.76164	18	9.84979	27	0.15021	9.91185	9	43	17	8	7	5	5	3	3	2
18	9.76182	18	9.85006	27	0 14994	9.91176	9	42	18	8	8	5	5	3	3	2
19	9.76200	18	9.85033	26	0.14967	9.91167	9	41	19	9	8	6	5	3	3	3
20	9.76218	18	9.85059	27	0.14941	9.91158	9	40	20	9	9	6	6	3	3	3
21	9.76236	17	9.85086	27	0.14914	9.91149	8	39	21	9	9	6	6	3	3	3
22	9.76253	18	9.85113	27	0.14887	9.91141	9	38	22	10	10	7	6	4	3	3
23	9 76271	18	9.85140	26	0.14860	9.91132	9	37	23	10	10	7	7	4	3	3
24	9.76289	18	9.85166	27	0.14834	9.91123	9	36	24	11	10	7	7	4	4	3
25	9.76307	17	9.85193	27	0.14807	9.91114	9	35	25	11	11	7	7	4	4	3
26	9.76324	18	9.85220	27	0.14780	9.91105	9	34	26	12	11	8	7	4	4	3
27	9 76342	18	9.85247	26	0.14753	9.91096	9	33	27	12	12	8	8	4	4	4
28	9.76360	18	9.85273	27	0.14727	9.91087	9	32	28	13	12	8	8	5	4	4
29	9.76378	17	9.85300	27	0.14700	9.91078	9	31	29	13	13	9	8	5	4	4
30	9.76395	18	9.85327	27	0.14673	9.91069	9	30	30	13	13	9	8	5	4	4
31	9.76413	18	9.85354	26	0.14646	9.91060	9	29	31	14	13	9	9	5	5	4
32	9.76431	17	9.85380	27	0.14620	9.91051	9	28	32	14	14	10	9	5	5	4
33	9.76448	18	9.85407	27	0.14593	9.91042	9	27	33	15	14	10	9	5	5	4
34	9.76466	18	9 85434	26	0.14566	9.91033	9	26	34	15	15	10	10	6	5	5
35	9.76484	17	9.85460	27	0.14540	9 91023	9	25	35	16	15	10	10	6	5	5
36	9.76501	18	9.85487	27	0.14513	9.91014	10	24	36	16	16	11	10	6	5	5
37	9.76519	18	9.85514	26	0.14486	9.91005	9	23	37	17	16	11	10	6	6	5
38	9.76537	17	9.85540	27	0.14460	9.90996	9	22	38	17	16	11	11	6	6	5
39	9.76554	18	9.85567	27	0.14433	9.90987	9	21	39	18	17	12	11	6	6	5
40	9 76572	18	9.85594	26	0.14406	9.90978	9	20	40	18	17	12	11	7	6	5
41	9.76590	17	9.85620	27	0.14380	9.90969	9	19	41	18	18	12	12	7	6	5
42	9.76607	18	9.85647	27	0.14353	9.90960	9	18	42	19	18	13	12	7	6	6
43	9.76625	17	9.85674	26	0.14326	9.90951	9	17	43	19	19	13	12	7	6	6
44	9.76642	18	9.85700	27	0.14300	9.90942	9	16	44	20	19	13	12	7	7	6
45	9.76660	17	9.85727	27	0.14273	9.90933	9	15	45	20	19	13	13	7	7	6
46	9.76677	18	9.85754	26	0.14246	9.90924	9	14	46	21	20	14	13	8	7	6
47	9 76695	17	9.85780	27	0.14220	9.90915	9	13	47	21	20	14	13	8	7	6
48	9.76712	18	9.85807	27	0.14193	9.90906	10	12	48	22	21	14	14	8	7	6
49	9.76730	17	9.85834	26	0.14166	9.90896	9	11	49	22	21	15	14	8	7	7
50	9.76747	18	9.85860	27	0.14140	9.90887	9	10	50	22	22	15	14	8	7	7
51	9.76765	17	9 85887	26	0.14113	9.90878	9	9	51	23	22	15	14	8	8	7
52	9.76782	18	9.85913	27	0.14087	9.90869	9	8	52	23	23	16	15	9	8	7
53	9.76800	17	9.85940	27	0.14060	9.90860	9	7	53	24	23	16	15	9	8	7
54	9.76817	18	9.85967	26	0.14033	9.90851	9	6	54	24	23	16	15	9	8	7
55	9.76835	17	9.85993	27	0 14007	9.90842	10	5	55	25	24	16	16	9	8	7
56	9.76852	18	9.86020	26	0.13980	9.90832	9	4	56	25	24	17	16	9	8	7
57	9.76870	17	9.86046	27	0.13954	9.90823	9	3	57	26	25	17	16	9	9	8
58	9.76887	17	9.86073	27	0.13927	9.90814	9	2	58	26	25	17	16	10	9	8
59	9.76904	18	9.86100	26	0.13900	9.90805	9	1	59	27	26	18	17	10	9	8
60	9.76922		9.86126		0.13874	9.90796		0	60	27	26	18	17	10	9	8
′	Cos	d.	Cotg	d.c	Tang	Sin	d.	′	″	P. P.						

′	Sin	d.	Tang	d. c.	Cotg	Cos	d.	′	″	P. P.						
										27	26	18	11	16	10	9
0	9.76922	17	9.86126	27	0.13874	9.90796	9	60								
1	9.76939	18	9.86153	26	0.13847	9.90787	10	59	1	0	0	0	0	0	0	0
2	9.76957	17	9.86179	27	0.13821	9.90777	9	58	2	1	1	1	1	1	0	0
3	9.76974	17	9.86206	26	0.13794	9.90768	9	57	3	1	1	1	1	1	0	0
4	9.76991	18	9.86232	27	0.13768	9.90759	9	56	4	2	2	1	1	1	1	1
5	9.77009	17	9.86259	26	0.13741	9.90750	9	55	5	2	2	1	1	1	1	1
6	9.77026	17	9.86285	27	0.13715	9.90741	10	54	6	3	3	2	2	2	1	1
7	9.77043	18	9.86312	26	0.13688	9.90731	9	53	7	3	3	2	2	2	1	1
8	9.77061	17	9.86338	27	0.13662	9.90722	9	52	8	4	3	2	2	2	1	1
9	9.77078	17	9.86365	27	0.13635	9.90713	9	51	9	4	4	3	3	2	1	1
10	9.77095	17	9.86392	26	0.13608	9.90704	10	50	10	4	4	3	3	3	2	1
11	9.77112	18	9.86418	27	0.13582	9.90694	9	49	11	5	5	3	3	3	2	2
12	9.77130	17	9.86445	26	0.13555	9.90685	9	48	12	5	5	4	3	3	2	2
13	9.77147	17	9.86471	27	0.13529	9.90676	9	47	13	6	6	4	4	3	2	2
14	9.77164	17	9.86498	26	0.13502	9.90667	10	46	14	6	6	4	4	4	2	2
15	9.77181	18	9.86524	27	0.13476	9.90657	9	45	15	7	6	4	4	4	2	2
16	9.77199	17	9.86551	26	0.13449	9.90648	9	44	16	7	7	5	5	4	3	2
17	9.77216	17	9.86577	26	0.13423	9.90639	9	43	17	8	7	5	5	5	3	3
18	9.77233	17	9.86603	27	0.13397	9.90630	10	42	18	8	8	5	5	5	3	3
19	9.77250	18	9.86630	26	0.13370	9.90620	9	41	19	9	8	6	5	5	3	3
20	9.77268	17	9.86656	27	0.13344	9.90611	9	40	20	9	9	6	6	5	3	3
21	9.77285	17	9.86683	26	0.13317	9.90602	10	39	21	9	9	6	6	6	3	3
22	9.77302	17	9.86709	27	0.13291	9.90592	9	38	22	10	10	7	6	6	4	3
23	9.77319	17	9.86736	26	0.13264	9.90583	9	37	23	10	10	7	7	6	4	4
24	9.77336	17	9.86762	27	0.13238	9.90574	9	36	24	11	10	7	7	6	4	4
25	9.77353	17	9.86789	26	0.13211	9.90565	10	35	25	11	11	7	7	7	4	4
26	9.77370	17	9.86815	27	0.13185	9.90555	9	34	26	12	11	8	7	7	4	4
27	9.77387	18	9.86842	26	0.13158	9.90546	9	33	27	12	12	8	8	7	4	4
28	9.77405	17	9.86868	26	0.13132	9.90537	10	32	28	13	12	8	8	7	5	4
29	9.77422	17	9.86894	27	0.13106	9.90527	9	31	29	13	13	9	8	8	5	4
30	9.77439	17	9.86921	26	0.13079	9.90518	9	30	30	13	13	9	8	8	5	4
31	9.77456	17	9.86947	27	0.13053	9.90509	10	29	31	14	13	9	9	8	5	5
32	9.77473	17	9.86974	26	0.13026	9.90499	9	28	32	14	14	10	9	9	5	5
33	9.77490	17	9.87000	27	0.13000	9.90490	10	27	33	15	14	10	9	9	5	5
34	9.77507	17	9.87027	26	0.12973	9.90480	9	26	34	15	15	10	10	9	6	5
35	9.77524	17	9.87053	26	0.12947	9.90471	9	25	35	16	15	10	10	9	6	5
36	9.77541	17	9.87079	27	0.12921	9.90462	10	24	36	16	16	11	10	10	6	5
37	9.77558	17	9.87106	26	0.12894	9.90452	9	23	37	17	16	11	10	10	6	6
38	9.77575	17	9 87132	26	0.12868	9.90443	9	22	38	17	16	11	11	10	6	6
39	9.77592	17	9.87158	27	0.12842	9.90434	10	21	39	18	17	12	11	10	6	6
40	9.77609	17	9.87185	26	0 12815	9.90424	9	20	40	18	17	12	11	11	7	6
41	9.77626	17	9.87211	27	0.12789	9.90415	10	19	41	18	18	12	12	11	7	6
42	9.77643	17	9.87238	26	0.12762	9.90405	9	18	42	19	18	13	12	11	7	6
43	9.77660	17	9.87264	26	0.12736	9.90396	10	17	43	19	19	13	12	11	7	6
44	9.77677	17	9.87290	27	0.12710	9.90386	9	16	44	20	19	13	12	12	7	7
45	9.77694	17	9 87317	26	0.12683	9.90377	9	15	45	20	19	13	13	12	7	7
46	9.77711	17	9.87343	26	0.12657	9.90368	10	14	46	21	20	14	13	12	8	7
47	9.77728	16	9.87369	27	0.12631	9.90358	9	13	47	21	20	14	13	13	8	7
48	9.77744	17	9.87396	26	0.12604	9.90349	10	12	48	22	21	14	14	13	8	7
49	9.77761	17	9.87422	26	0.12578	9.90339	9	11	49	22	21	15	14	13	8	7
50	9.77778	17	9.87448	27	0.12552	9.90330	10	10	50	22	22	15	14	13	8	7
51	9.77795	17	9.87475	26	0.12525	9.90320	9	9	51	23	22	15	14	14	8	8
52	9.77812	17	9.87501	26	0.12499	9.90311	10	8	52	23	23	16	15	14	9	8
53	9.77829	17	9.87527	27	0.12473	9.90301	9	7	53	24	23	16	15	14	9	8
54	9.77846	16	9.87554	26	0.12446	9.90292	10	6	54	24	23	16	15	14	9	8
55	9.77862	17	9 87580	26	0.12420	9.90282	9	5	55	25	24	16	16	15	9	8
56	9.77879	17	9.87606	27	0.12394	9.90273	10	4	56	25	24	17	16	15	9	8
57	9.77896	17	9.87633	26	0.12367	9.90263	9	3	57	26	25	17	16	15	9	9
58	9.77913	17	9.87659	26	0.12341	9.90254	10	2	58	26	25	17	16	15	10	9
59	9.77930	16	9.87685	26	0.12315	9.90244	9	1	59	27	26	18	17	16	10	9
60	9.77946		9.87711		0 12289	9.90235		0	60	27	26	18	17	16	10	9
′	Cos	d.	Cotg.	d. c.	Tang	Sin	d.	′	″	P. P.						

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.						
										27	26	17	16	15	10	9
0	9.77946		9.87711		0.12289	9.90235		60								
1	9.77963	17	9.87738	27	0.12262	9.90225	10	59	1	0	0	0	0	0	0	0
2	9.77980	17	9.87764	26	0.12236	9.90216	9	58	2	1	1	1	1	0	0	0
3	9.77997	17	9.87790	26	0.12210	9.90206	10	57	3	1	1	1	1	1	0	0
4	9.78013	16	9.87817	27	0.12183	9.90197	9	56	4	2	2	1	1	1	1	1
		17		26			10									
5	9.78030		9.87843		0.12157	9.90187		55	5	2	2	1	1	1	1	1
6	9.78047	17	9.87869	26	0.12131	9.90178	9	54	6	3	3	2	2	1	1	1
7	9.78063	16	9.87895	26	0.12105	9.90168	10	53	7	3	3	2	2	2	1	1
8	9.78080	17	9 87922	27	0.12078	9.90159	9	52	8	4	3	2	2	2	1	1
9	9.78097	17	9.87948	26	0.12052	9.90149	10	51	9	4	4	3	2	2	1	1
		16		26			10									
10	9.78113		9.87974		0.12026	9.90139		50	10	4	4	3	3	2	2	1
11	9.78130	17	9.88000	26	0.12000	9.90130	9	49	11	5	5	3	3	3	2	2
12	9.78147	17	9.88027	27	0.11973	9.90120	10	48	12	5	5	3	3	3	2	2
13	9.78163	16	9.88053	26	0.11947	9.90111	9	47	13	6	6	4	3	3	2	2
14	9.78180	17	9.88079	26	0.11921	9.90101	10	46	14	6	6	4	4	3	2	2
		17		26			10									
15	9.78197		9.88105		0.11895	9.90091		45	15	7	6	4	4	4	2	2
16	9.78213	16	9.88131	26	0.11869	9.90082	9	44	16	7	7	5	4	4	3	2
17	9.78230	17	9.88158	27	0.11842	9.90072	10	43	17	8	7	5	5	4	3	3
18	9.78246	16	9.88184	26	0.11816	9.90063	9	42	18	8	8	5	5	4	3	3
19	9 78263	17	9.88210	26	0.11790	9.90053	10	41	19	9	8	5	5	5	3	3
		17		26			10									
20	9.78280		9.88236		0.11764	9.90043		40	20	9	9	6	5	5	3	3
21	9.78296	16	9.88262	26	0.11738	9.90034	9	39	21	9	9	6	6	5	3	3
22	9.78313	17	9.88289	27	0.11711	9.90024	10	38	22	10	10	6	6	5	4	3
23	9.78329	16	9.88315	26	0.11685	9.90014	10	37	23	10	10	7	6	6	4	3
24	9.78346	17	9.88341	26	0.11659	9.90005	9	36	24	11	10	7	6	6	4	4
		16		26			10									
25	9.78362		9.88367		0.11633	9.89995		35	25	11	11	7	7	6	4	4
26	9.78379	17	9.88393	26	0.11607	9.89985	10	34	26	12	11	7	7	6	4	4
27	9.78395	16	9.88420	27	0.11580	9.89976	9	33	27	12	12	8	7	7	4	4
28	9.78412	17	9.88446	26	0.11554	9.89966	10	32	28	13	12	8	7	7	5	4
29	9.78428	16	9.88472	26	0.11528	9.89956	10	31	29	13	13	8	8	7	5	4
		17		26			9									
30	9.78445		9.88498		0.11502	9.89947		30	30	13	13	8	8	7	5	4
31	9.78461	16	9.88524	26	0.11476	9.89937	10	29	31	14	13	9	8	8	5	5
32	9 78478	17	9.88550	26	0.11450	9.89927	10	28	32	14	14	9	9	8	5	5
33	9.78494	16	9.88577	27	0.11423	9.89918	9	27	33	15	14	9	9	8	5	5
34	9.78510	16	9.88603	26	0.11397	9.89908	10	26	34	15	15	10	9	8	6	5
		17		26			10									
35	9.78527		9.88629		0.11371	9.89898		25	35	16	15	10	9	9	6	5
36	9.78543	16	9.88655	26	0.11345	9.89888	10	24	36	16	16	10	10	9	6	5
37	9.78560	17	9.88681	26	0.11319	9.89879	9	23	37	17	16	10	10	9	6	6
38	9.78576	16	9.88707	26	0.11293	9.89869	10	22	38	17	16	11	10	9	6	6
39	9.78592	16	9.88733	26	0.11267	9.89859	10	21	39	18	17	11	10	10	6	6
		17		26			10									
40	9.78609		9.88759		0.11241	9.89849		20	40	18	17	11	11	10	7	6
41	9.78625	16	9.88786	27	0.11214	9.89840	9	19	41	18	18	12	11	10	7	6
42	9.78642	17	9.88812	26	0.11188	9.89830	10	18	42	19	18	12	11	10	7	6
43	9.78658	16	9.88838	26	0.11162	9.89820	10	17	43	19	19	12	11	11	7	6
44	9.78674	16	9.88864	26	0.11136	9.89810	10	16	44	20	19	12	12	11	7	7
		17		26			9									
45	9.78691		9.88890		0.11110	9.89801		15	45	20	19	13	12	11	7	7
46	9.78707	16	9.88916	26	0.11084	9.89791	10	14	46	21	20	13	12	11	8	7
47	9.78723	16	9.88942	26	0.11058	9.89781	10	13	47	21	20	13	13	12	8	7
48	9.78739	16	9 88968	26	0.11032	9.89771	10	12	48	22	21	14	13	12	8	7
49	9.78756	17	9.88994	26	0.11006	9.89761	10	11	49	22	21	14	13	12	8	7
		16		26			9									
50	9.78772		9.89020		0.10980	9.89752		10	50	22	22	14	13	12	8	7
51	9.78788	16	9.89046	27	0.10954	9.89742	10	9	51	23	22	14	14	13	8	8
52	9.78805	17	9.89073	26	0.10927	9.89732	10	8	52	23	23	15	14	13	9	8
53	9.78821	16	9.89099	26	0.10901	9.89722	10	7	53	24	23	15	14	13	9	8
54	9.78837	16	9.89125	26	0.10875	9.89712	10	6	54	24	23	15	14	13	9	8
		16		26			10									
55	9.78853		9.89151		0.10849	9.89702		5	55	25	24	16	15	14	9	8
56	9.78869	16	9.89177	26	0.10823	9.89693	9	4	56	25	24	16	15	14	9	8
57	9.78886	17	9.89203	26	0.10797	9.89683	10	3	57	26	25	16	15	14	9	9
58	9.78902	16	9.89229	26	0.10771	9.89673	10	2	58	26	25	16	15	14	10	9
59	9.78918	16	9.89255	26	0.10745	9.89663	10	1	59	27	26	17	16	15	10	9
		16		26			10									
60	9 78934		9.89281		0.10719	9.89653		0	60	27	26	17	16	15	10	9
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.						

°	Sin	d.	Tang	d.c	Cotg	Cos	d.	′	″	P. P.							
										28	25	17	16	15	11	10	9
0	9.78934	16	9.89281	26	0.10719	9.89653	10	60									
1	9.78950	17	9.89307	26	0.10693	9 89643	10	59	1	0	0	0	0	0	0	0	0
2	9.78967	16	9.89333	26	0.10667	9.89633	9	58	2	1	1	1	1	0	0	0	0
3	9.78983	16	9.89359	26	0.10641	9.89624	10	57	3	1	1	1	1	1	1	0	0
4	9.78999	16	9.89385	26	0.10615	9.89614	10	56	4	2	2	1	1	1	1	1	1
5	9.79015	16	9.89411	26	0.10589	9.89604	10	55	5	2	2	1	1	1	1	1	1
6	9.79031	16	9 89437	26	0.10563	9.89594	10	54	6	3	2	2	2	1	1	1	1
7	9.79047	16	9.89463	26	0.10537	9.89584	10	53	7	3	3	2	2	2	1	1	1
8	9.79063	16	9.89489	26	0.10511	9.89574	10	52	8	3	3	2	2	2	1	1	1
9	9.79079	16	9 89515	26	0.10485	9.89564	10	51	9	4	4	3	2	2	2	1	1
10	9.79095	16	9.89541	26	0 10459	9.89554	10	50	10	4	4	3	3	2	2	2	1
11	9.79111	17	9.89567	26	0.10433	9.89544	10	49	11	5	5	3	3	3	2	2	2
12	9.79128	16	9.89593	26	0.10407	9 89534	10	48	12	5	5	3	3	3	2	2	2
13	9.79144	16	9.89619	26	0.10381	9.89524	10	47	13	6	5	4	3	3	2	2	2
14	9.79160	16	9.89645	26	0.10355	9.89514	10	46	14	6	6	4	4	3	3	2	2
15	9.79176	16	9.89671	26	0.10329	9.89504	9	45	15	6	6	4	4	4	3	2	2
16	9.79192	16	9.89697	26	0 10303	9.89495	10	44	16	7	7	5	4	4	3	3	2
17	9.79208	16	9.89723	26	0.10277	9.89185	10	43	17	7	7	5	5	4	3	3	3
18	9.79224	16	9.89749	26	0.10251	9.89475	10	42	18	8	7	5	5	4	3	3	3
19	9.79240	16	9.89775	26	0.10225	9.89465	10	41	19	8	8	5	5	5	3	3	3
20	9.79256	16	9.89801	26	0.10199	9.89455	10	40	20	9	8	6	5	5	4	3	3
21	9.79272	16	9.89827	26	0 10173	9.89445	10	39	21	9	9	6	6	5	4	3	3
22	9.79288	16	9.89853	26	0.10147	9.89435	10	38	22	10	9	6	6	5	4	4	3
23	9.79304	15	9.89879	26	0.10121	9.89425	10	37	23	10	10	7	6	6	4	4	3
24	9.79319	16	9.89905	26	0 10095	9.89415	10	36	24	10	10	7	6	6	4	4	4
25	9.79335	16	9.89931	26	0.10069	9.89105	10	35	25	11	10	7	7	6	5	4	4
26	9.79351	16	9.89957	26	0.10043	9.89395	10	34	26	11	11	7	7	6	5	4	4
27	9.79367	16	9.89983	26	0 10017	9.89385	10	33	27	12	11	8	7	7	5	4	4
28	9.79383	16	9.90009	26	0.09991	9.89375	11	32	28	12	12	8	7	7	5	5	4
29	9.79399	16	9.90035	26	0.09965	9.89364	10	31	29	13	12	8	8	7	5	5	4
30	9.79415	16	9.90061	25	0.09939	9.89354	10	30	30	13	12	8	8	7	5	5	4
31	9.79431	16	9.90086	26	0.09914	9.89344	10	29	31	13	13	9	8	8	6	5	5
32	9.79447	16	9.90112	26	0.09888	9.89334	10	28	32	14	13	9	9	8	6	5	5
33	9.79463	15	9.90138	26	0.09862	9.89324	10	27	33	14	14	9	9	8	6	5	5
34	9.79478	16	9.90164	26	0.09836	9.89314	10	26	34	15	14	10	9	8	6	6	5
35	9.79494	16	9.90190	26	0.09810	9.89304	10	25	35	15	15	10	9	9	6	6	5
36	9.79510	16	9.90216	26	0.09784	9.89294	10	24	36	16	15	10	10	9	7	6	5
37	9.79526	16	9.90242	26	0.09758	9.89284	10	23	37	16	15	10	10	9	7	6	6
38	9.79542	16	9.90268	26	0.09732	9.89274	10	22	38	16	16	11	10	9	7	6	6
39	9.79558	15	9.90294	26	0 09706	9.89264	10	21	39	17	16	11	10	10	7	6	6
40	9.79573	16	9.90320	26	0.09680	9.89254	10	20	40	17	17	11	11	10	7	7	6
41	9.79589	16	9.90346	25	0.09654	9.89244	11	19	41	18	17	12	11	10	8	7	6
42	9.79605	16	9.90371	26	0.09629	9.89233	10	18	42	18	17	12	11	10	8	7	6
43	9.79621	15	9.90397	26	0 09603	9.89223	10	17	43	19	18	12	11	11	8	7	6
44	9.79636	16	9.90423	26	0.09577	9.89213	10	16	44	19	18	12	12	11	8	7	7
45	9.79652	16	9.90449	26	0 09551	9 89203	10	15	45	19	19	13	12	11	8	7	7
46	9.79668	16	9.90475	26	0.09525	9.89193	10	14	46	20	19	13	12	11	8	8	7
47	9.79684	15	9.90501	26	0.09499	9.89183	10	13	47	20	20	13	13	12	9	8	7
48	9.79699	16	9.90527	26	0.09473	9.89173	11	12	48	21	20	14	13	12	9	8	7
49	9.79715	16	9.90553	25	0.09447	9.89162	10	11	49	21	20	14	13	12	9	8	7
50	9.76731	15	9.90578	26	0.09422	9 89152	10	10	50	22	21	14	13	12	9	8	7
51	9.79746	16	9.90604	26	0.09396	9.89142	10	9	51	22	21	14	14	13	9	8	8
52	9.79762	16	9.90630	26	0 09370	9.89132	10	8	52	23	22	15	14	13	10	9	8
53	9.79778	15	9.90656	26	0.09344	9.89122	10	7	53	23	22	15	14	13	10	9	8
54	9.79793	16	9.90682	26	0.09318	9.89112	11	6	54	23	22	15	14	13	10	9	8
55	9.79809	16	9.90708	26	0.09292	9 89101	10	5	55	24	23	16	15	14	10	9	8
56	9.79825	15	9.90734	25	0.09266	9.89091	10	4	56	24	23	16	15	14	10	9	8
57	9.79840	16	9 90759	26	0.09241	9.89081	10	3	57	25	24	16	15	14	10	9	9
58	9.79856	16	9.90785	26	0 09215	9.89071	11	2	58	25	24	16	15	14	11	10	9
59	9.79872	15	9.90811	26	0.09189	9.89060	10	1	59	26	25	17	16	15	11	10	9
60	9.79887		9.90837		0.09163	9.89050		0	60	26	25	17	16	15	11	10	9
′	Cos	d.	Cotg	d.c	Tang	Sin	d.	′	″	P. P.							

′	Sin	d.	Tang	d. c	Cotg	Cos	d.	′	″	P. P.					
										26	25	16	15	11	10
0	9.79887	16	9.90837	26	0.09163	9.89050	10	60							
1	9.79903	15	9.90863	26	0.09137	9.89040	10	59	1	0	0	0	0	0	0
2	9.79918	16	9.90889	25	0.09111	9.89030	10	58	2	1	1	1	0	0	0
3	9.79934	16	9.90914	26	0.09086	9.89020	11	57	3	1	1	1	1	1	0
4	9.79950	15	9.90940	26	0.09060	9.89009	10	56	4	2	2	1	1	1	1
5	9.79965	16	9.90966	26	0.09034	9.88999	10	55	5	2	2	1	1	1	1
6	9.79981	15	9.90992	26	0.09008	9.88989	11	54	6	3	2	2	1	1	1
7	9.79996	16	9.91018	25	0.08982	9.88978	10	53	7	3	3	2	2	1	1
8	9.80012	15	9.91043	26	0.08957	9.88968	10	52	8	3	3	2	2	1	1
9	9.80027	16	9.91069	26	0.08931	9.88958	10	51	9	4	4	2	2	2	1
10	9.80043	15	9.91095	26	0 08905	9.88948	11	50	10	4	4	3	2	2	2
11	9.80058	16	9.91121	26	0.08879	9.88937	10	49	11	5	5	3	3	2	2
12	9.80074	15	9.91147	25	0 08853	9.88927	10	48	12	5	5	3	3	2	2
13	9.80089	16	9.91172	26	0.08828	9.88917	11	47	13	6	5	3	3	2	2
14	9.80105	15	9.91198	26	0.08802	9.88906	10	46	14	6	6	4	3	3	2
15	9.80120	16	9.91224	26	0.08776	9.88896	10	45	15	6	6	4	4	3	2
16	9.80136	15	9.91250	26	0.08750	9.88886	11	44	16	7	7	4	4	3	3
17	9.80151	15	9.91276	25	0 08724	9.88875	10	43	17	7	7	5	4	3	3
18	9.80166	16	9.91301	26	0.08699	9.88865	10	42	18	8	7	5	4	3	3
19	9.80182	15	9.91327	26	0.08673	9.88855	11	41	19	8	8	5	5	3	3
20	9.80197	16	9.91353	26	0.08647	9.88844	10	40	20	9	8	5	5	4	3
21	9.80213	15	9.91379	25	0.08621	9.88834	10	39	21	9	9	6	5	4	3
22	9.80228	16	9.91404	26	0.08596	9.88824	11	38	22	10	9	6	5	4	4
23	9.80244	15	9.91430	26	0.08570	9.88813	10	37	23	10	10	6	6	4	4
24	9.80259	15	9.91456	26	0.08544	9.88803	10	36	24	10	10	6	6	4	4
25	9.80274	16	9.91482	25	0.08518	9.83793	11	35	25	11	10	7	6	5	4
26	9.80290	15	9.91507	26	0.08493	9.88782	10	34	26	11	11	7	6	5	4
27	9.80305	15	9.91533	26	0.08467	9.88772	11	33	27	12	11	7	7	5	4
28	9.80320	16	9.91559	26	0.08441	9.88761	10	32	28	12	12	7	7	5	5
29	9.80336	15	9.91585	25	0.08415	9.88751	10	31	29	13	12	8	7	5	5
30	9.80351	15	9.91610	26	0.08390	9.88741	11	30	30	13	12	8	7	5	5
31	9.80366	16	9.91636	26	0.08364	9.88730	10	29	31	13	13	8	8	6	5
32	9.80382	15	9.91662	26	0.08338	9.88720	11	28	32	14	13	9	8	6	5
33	9.80397	15	9.91688	25	0.08312	9.88709	10	27	33	14	14	9	8	6	5
34	9.80412	16	9.91713	26	0.08287	9.88699	11	26	34	15	14	9	8	6	6
35	9.80428	15	9.91739	26	0.08261	9.88688	10	25	35	15	15	9	9	6	6
36	9.80443	15	9.91765	26	0.08235	9.88678	10	24	36	16	15	10	9	7	6
37	9.80458	15	9.91791	25	0.08209	9.88668	11	23	37	16	15	10	9	7	6
38	9.80473	16	9.91816	26	0.09184	9.88657	10	22	38	16	16	10	9	7	6
39	9.80489	15	9.91842	26	0.08158	9.88647	11	21	39	17	16	10	10	7	6
40	9.80504	15	9.91868	25	0.08132	9.88636	10	20	40	17	17	11	10	7	7
41	9.80519	15	9.91893	26	0.08107	9.88626	11	19	41	18	17	11	10	8	7
42	9.80534	16	9.91919	26	0.08081	9.88615	10	18	42	18	17	11	10	8	7
43	9.80550	15	9.91945	26	0.08055	9.88605	11	17	43	19	18	11	11	8	7
44	9.80565	15	9.91971	25	0.08029	9.88594	10	16	44	19	18	12	11	8	7
45	9.80580	15	9.91996	26	0.08004	9.88584	11	15	45	19	19	12	11	8	7
46	9.80595	15	9.92022	26	0.07978	9.88573	10	14	46	20	19	12	11	8	8
47	9.80610	15	9.92048	25	0.07952	9.88563	11	13	47	20	20	13	12	9	8
48	9.80525	16	9.92073	26	0.07927	9·88552	10	12	48	21	20	13	12	9	8
49	9.80641	15	9.92099	26	0.07901	9.88542	11	11	49	21	20	13	12	9	8
50	9.80656	15	9.92125	25	0.07875	9.88531	10	10	50	22	21	13	12	9	8
51	9.80671	15	9.92150	26	0.07850	9.88521	11	9	51	22	21	14	13	9	8
52	9.80686	15	9.92176	26	0.07824	9.88510	11	8	52	23	22	14	13	10	9
53	9.80701	15	9.92202	26	0.07798	9.88499	10	7	53	23	22	14	13	10	9
54	9.80716	15	9.92227	25	0.07773	9.88489	11	6	54	23	22	14	13	10	9
55	9.80731	15	9.92253	26	0.07747	9.88478	10	5	55	24	23	15	14	10	9
56	9.80746	16	9.92279	25	0.07721	9.88468	11	4	56	24	23	15	14	10	9
57	9.80762	15	9.92304	26	0.07696	9.88457	10	3	57	25	24	15	14	10	9
58	9.80777	15	9.92330	26	0.07670	9.88447	11	2	58	25	24	15	14	11	10
59	9.80792	15	9.92356	25	0.07644	9.88436	11	1	59	26	25	16	15	11	10
60	9.80807		9.92381		0.07619	9.88425		0	60	26	25	16	15	11	10
′	Cos	d.	Colg	d. c.	Tang	Sin	d.	′	″	P. P.					

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.					
										26	25	15	14	11	10
0	9.80807	15	9.92381	26	0.07619	9.88425	10	60							
1	9.80822	15	9.92407	26	0.07593	9.88415	11	59	1	0	0	0	0	0	0
2	9.80837	15	9.92433	25	0.07567	9.88404	10	58	2	1	1	0	0	0	0
3	9.80852	15	9.92458	26	0.07542	9.88394	11	57	3	1	1	1	1	1	0
4	9.80867	15	9.92484	26	0.07516	9.88383	11	56	4	2	2	1	1	1	1
5	9 80882	15	9.92510	25	0.07490	9.88372	10	55	5	2	2	1	1	1	1
6	9.80897	15	9.92535	26	0.07465	9.88362	11	54	6	3	2	1	1	1	1
7	9.80912	15	9.92561	26	0.07439	9.88351	11	53	7	3	3	2	2	1	1
8	9.80927	15	9.92587	25	0.07413	9.88340	10	52	8	3	3	2	2	1	1
9	9 80942	15	9.92612	26	0.07388	9.88330	11	51	9	4	4	2	2	2	1
10	9.80957	15	9.92638	25	0.07362	9.88319	11	50	10	4	4	2	2	2	2
11	9.80972	15	9.92663	26	0.07337	9.88308	10	49	11	5	5	3	3	2	2
12	9.80987	15	9.92689	26	0.07311	9.88298	11	48	12	5	5	3	3	2	2
13	9.81002	15	9.92715	25	0.07285	9.88287	11	47	13	6	5	3	3	2	2
14	9.81017	15	9.92740	26	0.07260	9 88276	10	46	14	6	6	3	3	3	2
15	9.81032	15	9.92766	26	0.07234	9.88266	11	45	15	6	6	4	3	3	2
16	9.81047	14	9.92792	25	0.07208	9.88255	11	44	16	7	7	4	4	3	3
17	9.81061	15	9.92817	26	0.07183	9.88244	10	43	17	7	7	4	4	3	3
18	9.81076	15	9.92843	25	0.07157	9.88234	11	42	18	8	7	4	4	3	3
19	9 81091	15	9.92868	26	0.07132	9.88223	11	41	19	8	8	5	4	3	3
20	9.81106	15	9.92894	26	0.07106	9.88212	11	40	20	9	8	5	5	4	3
21	9.81121	15	9.92920	25	0.07080	9.88201	10	39	21	9	9	5	5	4	3
22	9.81136	15	9.92945	26	0.07055	9.88191	11	38	22	10	9	5	5	4	4
23	9.81151	15	9.92971	25	0.07029	9.88180	11	37	23	10	10	6	5	4	4
24	9.81166	14	9.92996	26	0.07004	9.88169	11	36	24	10	10	6	6	4	4
25	9.81180	15	9.93022	26	0.06978	9.88158	10	35	25	11	10	6	6	5	4
26	9.81195	15	9.93048	25	0.06952	9.88148	11	34	26	11	11	6	6	5	4
27	9.81210	15	9.93073	26	0.06927	9.88137	11	33	27	12	11	7	6	5	4
28	9.81225	15	9.93099	25	0.06901	9.88126	11	32	28	12	12	7	7	5	5
29	9.81240	14	9.93124	26	0.06876	9.88115	10	31	29	13	12	7	7	5	5
30	9.81254	15	9.93150	25	0.06850	9 88105	11	30	30	13	12	7	7	5	5
31	9.81269	15	9.93175	26	0.06825	9.88094	11	29	31	13	13	8	7	6	5
32	9.81284	15	9 93201	26	0.06799	9.88083	11	28	32	14	13	8	7	6	5
33	9.81299	15	9.93227	25	0.06773	9.88072	11	27	33	14	14	8	8	6	5
34	9.81314	14	9.93252	26	0.06748	9.88061	10	26	34	15	14	8	8	6	6
35	9.81328	15	9.93278	25	0.06722	9.88051	11	25	35	15	15	9	8	6	6
36	9.81343	15	9.93303	26	0.06697	9.88040	11	24	36	16	15	9	8	7	6
37	9.81358	14	9.93329	25	0.06671	9.88029	11	23	37	16	15	9	9	7	6
38	9.81372	15	9.93354	26	0.06646	9.88018	11	22	38	16	16	9	9	7	6
39	9.81387	15	9.93380	26	0.06620	9.88007	11	21	39	17	16	10	9	7	6
40	9.81402	15	9.93406	25	0.06594	9.87996	11	20	40	17	17	10	9	7	7
41	9.81417	14	9.93431	26	0.06569	9.87985	10	19	41	18	17	10	10	8	7
42	9.81431	15	9.93457	25	0.06543	9.87975	11	18	42	18	17	10	10	8	7
43	9.81446	15	9.93482	26	0.06518	9.87964	11	17	43	19	18	11	10	8	7
44	9.81461	14	9.93508	25	0.06492	9.87953	11	16	44	19	18	11	10	8	7
45	9.81475	15	9 93533	26	0.06467	9.87942	11	15	45	19	19	11	10	8	7
46	9.81490	15	9.93559	25	0.06441	9.87931	11	14	46	20	19	11	11	8	8
47	9.81505	14	9.93584	26	0.06416	9.87920	11	13	47	20	20	12	11	9	8
48	9.81519	15	9.93610	26	0.06390	9.87909	11	12	48	21	20	12	11	9	8
49	9.81534	15	9.93636	25	0.06364	9.87898	11	11	49	21	20	12	11	9	8
50	9.81549	14	9.93661	26	0.06339	9.87887	10	10	50	22	21	12	12	9	8
51	9.81563	15	9.93687	25	0.06313	9.87877	11	9	51	22	21	13	12	9	8
52	9.81578	14	9.93712	26	0.06288	9.87866	11	8	52	23	22	13	12	10	9
53	9.81592	15	9 93738	25	0.06262	9.87855	11	7	53	23	22	13	12	10	9
54	9.81607	15	9 93763	26	0.06237	9.87844	11	6	54	23	22	13	13	10	9
55	9.81622	14	9.93789	25	0.06211	9.87833	11	5	55	24	23	14	13	10	9
56	9.81636	15	9.93814	26	0.06186	9 87822	11	4	56	24	23	14	13	10	9
57	9.81651	14	9.93840	25	0.06160	9.87811	11	3	57	25	24	14	13	10	9
58	9.81665	15	9.93865	26	0 06135	9.87800	11	2	58	25	24	14	14	11	10
59	9.81680	14	9 93891	25	0.06109	9.87789	11	1	59	26	25	15	14	11	10
60	9 81694		9.93916		0.06084	9.87778		0	60	26	25	15	14	11	10
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.					

′	Sin	d.	Tang	d.e.	Cotg	Cos	d.	′	″	P. P.					
										26	25	15	14	12	11
0	9.81694	15	9 93916	26	0.06084	9.87778	11	60							
1	9.81709	14	9.93942	25	0.06058	9.87767	11	59	1	0	0	0	0	0	0
2	9.81723	15	9.93967	26	0.06033	9.87756	11	58	2	1	1	0	0	0	0
3	9.81738	14	9.93993	25	0.06007	9.87745	11	57	3	1	1	1	1	1	1
4	9.81752	15	9.94018	26	0.05982	9.87734	11	56	4	2	2	1	1	1	1
5	9.81767	14	9 94044	25	0.05956	9.87723	11	55	5	2	2	1	1	1	1
6	9.81781	15	9.94069	26	0.05931	9.87712	11	54	6	3	2	1	1	1	1
7	9.81796	14	9.94095	25	0.05905	9.87701	11	53	7	3	3	2	2	1	1
8	9.81810	15	9.94120	26	0.05880	9.87690	11	52	8	3	3	2	2	2	1
9	9.81825	14	9.94146	25	0.05854	9.87679	11	51	9	4	4	2	2	2	2
10	9.81839	15	9.94171	26	0.05829	9.87668	11	50	10	4	4	2	2	2	2
11	9.81854	14	9.94197	25	0.05803	9.87657	11	49	11	5	5	3	3	2	2
12	9.81868	15	9.94222	26	0.05778	9.87646	11	48	12	5	5	3	3	2	2
13	9.81883	14	9.94248	25	0.05752	9.87635	11	47	13	6	5	3	3	3	2
14	9.81897	14	9.94273	26	0.05727	9.87624	11	46	14	6	6	3	3	3	3
15	9.81911	15	9.94299	25	0.05701	9.87613	12	45	15	6	6	4	3	3	3
16	9.81926	14	9.94324	26	0 05676	9.87601	11	44	16	7	7	4	4	3	3
17	9.81940	15	9.94350	25	0.05650	9.87590	11	43	17	7	7	4	4	3	3
18	9.81955	14	9.94375	26	0.05625	9.87579	11	42	18	8	7	4	4	4	3
19	9.81969	14	9.94401	25	0.05599	9.87568	11	41	19	8	8	5	4	4	3
20	9.81983	15	9.94426	26	0.05574	9.87557	11	40	20	9	8	5	5	4	4
21	9.81998	14	9.94452	25	0.05548	9.87546	11	39	21	9	9	5	5	4	4
22	9.82012	14	9.94477	26	0.05523	9.87535	11	38	22	10	9	5	5	4	4
23	9.82026	15	9.94503	25	0.05497	9.87524	11	37	23	10	10	6	5	5	4
24	9.82041	14	9.94528	26	0.05472	9.87513	12	36	24	10	10	6	6	5	4
25	9.82055	14	9.94554	25	0.05446	9.87501	11	35	25	11	10	6	6	5	5
26	9.82069	15	9.94579	25	0.05421	9.87490	11	34	26	11	11	6	6	5	5
27	9.82084	14	9 94604	26	0.05396	9.87479	11	33	27	12	11	7	6	5	5
28	9.82098	14	9.94630	25	0.05370	9.87468	11	32	28	12	12	7	7	6	5
29	9.82112	14	9.94655	26	0.05345	9.87457	11	31	29	13	12	7	7	6	5
30	9.82126	15	9.94681	25	0.05319	9.87446	12	30	30	13	12	7	7	6	5
31	9.82141	14	9.94706	26	0.05294	9.87434	11	29	31	13	13	8	7	6	6
32	9.82155	14	9.94732	25	0.05268	9.87423	11	28	32	14	13	8	7	6	6
33	9.82169	14	9.94757	26	0.05243	9.87412	11	27	33	14	14	8	8	7	6
34	9.82184	15	9.94783	25	0.05217	9.87401	11	26	34	15	14	8	8	7	6
35	9.82198	14	9.94808	26	0.05192	9.87390	12	25	35	15	15	9	8	7	6
36	9.82212	14	9.94834	25	0.05166	9.87378	11	24	36	16	15	9	8	7	7
37	9.82226	14	9.94859	25	0 05141	9.87367	11	23	37	16	15	9	9	7	7
38	9.82240	15	9.94884	26	0.05116	9.87356	11	22	38	16	16	9	9	8	7
39	9.82255	14	9.94910	25	0.05090	9.87345	11	21	39	17	16	10	9	8	7
40	9.82269	14	9.94935	26	0.05065	9.87334	12	20	40	17	17	10	9	8	7
41	9.82283	15	9.94961	25	0.05039	9.87322	11	19	41	18	17	10	10	8	8
42	9.82297	14	9.94986	26	0.05014	9.87311	11	18	42	18	17	10	10	8	8
43	9.82311	15	9.95012	25	0.04988	9.87300	12	17	43	19	18	11	10	9	8
44	9.82326	14	9.95037	26	0.04963	9.87288	11	16	44	19	18	11	10	9	8
45	9.82340	14	9.95062	25	0.04938	9.87277	11	15	45	19	19	11	10	9	8
46	9.82354	14	9.95088	25	0.04912	9.87266	11	14	46	20	19	11	11	9	8
47	9.82368	14	9.95113	26	0.04887	9.87255	12	13	47	20	20	12	11	9	9
48	9.82382	14	9.95139	25	0.04861	9.87243	11	12	48	21	20	12	11	10	9
49	9.82396	14	9.95164	26	0.04836	9.87232	11	11	49	21	20	12	11	10	9
50	9.82410	14	9.95190	25	0.04810	9.87221	12	10	50	22	21	12	12	10	9
51	9.82124	15	9.95215	25	0.04785	9.87209	11	9	51	22	21	13	12	10	9
52	9.82439	14	9.95240	25	0.04760	9.87198	11	8	52	23	22	13	12	10	10
53	9.82453	14	9.95266	26	0.04734	9.87187	12	7	53	23	22	13	12	11	10
54	9 82467	15	9.95291	26	0.04709	9.87175	11	6	54	23	22	13	13	11	10
55	9.82481	14	9.95317	25	0 04683	9.87164	11	5	55	24	23	14	13	11	10
56	9.82495	14	9.95342	26	0.04658	9.87153	12	4	56	24	23	14	13	11	10
57	9.82509	14	9.95368	25	0.04632	9.87141	11	3	57	25	24	14	13	11	10
58	9.82523	14	9.95393	25	0.04607	9.87130	11	2	58	25	24	14	14	12	11
59	9.82537	14	9.95418	26	0.04582	9.87119	12	1	59	26	25	15	14	12	11
60	9.82551		9.95444		0.04556	9.87107		0	60	26	25	15	14	12	11
′	Cos	d.	Cotg	d.e.	Tang	Sin	d	′	″	P. P.					

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.					
										26	25	14	13	12	11
0	9.82551	14	9.95444	25	0.04556	9.87107	11	60							
1	9.82565	14	9.95469	26	0.04531	9.87096	11	59	1	0	0	0	0	0	0
2	9.82579	14	9.95495	25	0.04505	9.87085	12	58	2	1	1	0	0	0	0
3	9.82593	14	9.95520	25	0.04480	9.87073	11	57	3	1	1	1	1	1	1
4	9.82607	14	9.95545	26	0.04455	9.87062	12	56	4	2	2	1	1	1	1
5	9.82621	14	9.95571	25	0.04429	9.87050	11	55	5	2	2	1	1	1	1
6	9.82635	14	9.95596	26	0 04404	9.87039	11	54	6	3	2	1	1	1	1
7	9.82649	14	9.95622	25	0.04378	9.87028	12	53	7	3	3	2	2	1	1
8	9.82663	14	9.95647	25	0.04353	9.87016	11	52	8	3	3	2	2	2	1
9	9.82677	14	9.95672	26	0.04328	9.87005	12	51	9	4	4	2	2	2	2
10	9.82691	14	9.95698	25	0.04302	9.86993	11	50	10	4	4	2	2	2	2
11	9.82705	14	9.95723	25	0.04277	9.86982	12	49	11	5	5	3	2	2	2
12	9.82719	14	9.95748	26	0 04252	9.86970	11	48	12	5	5	3	3	2	2
13	9.82733	14	9.95774	25	0.04226	9.86959	12	47	13	6	5	3	3	3	2
14	9.82747	14	9.95799	26	0.04201	9.86947	11	46	14	6	6	3	3	3	3
15	9.82761	14	9.95825	25	0.04175	9.86936	12	45	15	6	6	3	3	3	3
16	9.82775	13	9.95850	25	0.04150	9.86924	11	44	16	7	7	4	3	3	3
17	9.82788	14	9.95875	26	0.04125	9.86913	11	43	17	7	7	4	4	3	3
18	9.82802	14	9.95901	25	0.04099	9.86902	12	42	18	8	7	4	4	4	3
19	9.82816	14	9.95926	26	0.04074	9.86890	11	41	19	8	8	4	4	4	3
20	9.82830	14	9.95952	25	0.04048	9.86879	12	40	20	9	8	5	4	4	4
21	9.82844	14	9.95977	25	0.04023	9.86867	12	39	21	9	9	5	5	4	4
22	9.82858	14	9.96002	26	0.03998	9.86855	11	38	22	10	9	5	5	4	4
23	9.82872	13	9.96028	25	0.03972	9.86844	12	37	23	10	10	5	5	5	4
24	9.82885	14	9.96053	25	0.03947	9.86832	11	36	24	10	10	6	5	5	4
25	9.82899	14	9.96078	26	0.03922	9.86821	12	35	25	11	10	6	5	5	5
26	9.82913	14	9.96104	25	0.03896	9.86809	11	34	26	11	11	6	6	5	5
27	9.82927	14	9.96129	26	0.03871	9.86798	12	33	27	12	11	6	6	5	5
28	9.82941	14	9.96155	25	0.03845	9.86786	11	32	28	12	12	7	6	6	5
29	9.82955	13	9.96180	25	0.03820	9.86775	12	31	29	13	12	7	6	6	5
30	9.82968	14	9.96205	26	0.03795	9.86763	11	30	30	13	12	7	6	6	5
31	9.82982	14	9 96231	25	0.03769	9.86752	12	29	31	13	13	7	7	6	6
32	9.82996	14	9.96256	25	0.03744	9.86740	12	28	32	14	13	7	7	6	6
33	9.83010	13	9.96281	26	0.03719	9.86728	11	27	33	14	14	8	7	7	6
34	9.83023	14	9.96307	25	0.03693	9.86717	12	26	34	15	14	8	7	7	6
35	9.83037	14	9.96332	25	0.03668	9.86705	11	25	35	15	15	8	8	7	6
36	9.83051	14	9.96357	26	0.03643	9.86694	12	24	36	16	15	8	8	7	7
37	9.83065	13	9.96383	25	0.03617	9.86682	12	23	37	16	15	9	8	7	7
38	9.83078	14	9.96408	25	0.03592	9.86670	11	22	38	16	16	9	8	8	7
39	9.83092	14	9.96433	26	0.03567	9.86659	12	21	39	17	16	9	8	8	7
40	9.83106	14	9.96459	25	0.03541	9.86647	12	20	40	17	17	9	9	8	7
41	9.83120	13	9.96484	26	0.03516	9.86635	11	19	41	18	17	10	9	8	8
42	9.83133	14	9.96510	25	0.03490	9.86624	12	18	42	18	17	10	9	8	8
43	9.83147	14	9.96535	25	0.03465	9.86612	12	17	43	19	18	10	9	9	8
44	9.83161	13	9.96560	26	0.03440	9.86600	11	16	44	19	18	10	10	9	8
45	9.83174	14	9.96586	25	0.03414	9.86589	12	15	45	19	19	10	10	9	8
46	9.83188	14	9.96611	25	0.03389	9.86577	12	14	46	20	19	11	10	9	8
47	9.83202	13	9.96636	26	0.03364	9.86565	11	13	47	20	20	11	10	9	9
48	9.83215	14	9.96662	25	0.03338	9.86554	12	12	48	21	20	11	10	10	9
49	9.83229	13	9.96687	25	0.03313	9.86542	12	11	49	21	20	11	11	10	9
50	9.83242	14	9.96712	26	0.03288	9.86530	12	10	50	22	21	12	11	10	9
51	9.83256	14	9,96738	25	0.03262	9.86518	11	9	51	22	21	12	11	10	9
52	9.83270	13	9.96763	25	0.03237	9.86507	12	8	52	23	22	12	11	10	10
53	9.83283	14	9.96788	26	0.03212	9.86495	12	7	53	23	22	12	11	11	10
54	9.83297	13	9.96814	25	0.03186	9.86483	11	6	54	23	22	13	12	11	10
55	9.83310	14	9.96839	25	0.03161	9.86472	12	5	55	24	23	13	12	11	10
56	9.83324	14	9.96864	26	0.03136	9.86460	12	4	56	24	23	13	12	11	10
57	9.83338	13	9.96890	25	0.03110	9.86448	12	3	57	25	24	13	12	11	10
58	9.83351	14	9.96915	25	0.03085	9.86436	11	2	58	25	24	14	13	12	11
59	9.83365	13	9.96940	26	0.03060	9.86425	12	1	59	26	25	14	13	12	11
60	9.83378		9.96966		0.03034	9.86413		0	60	26	25	14	13	12	11
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.					

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.					
										26	25	14	13	12	11
0	9.83378	14	9.96966	25	0.03034	9.86413	12	60							
1	9.83392	13	9.96991	25	0.03009	9.86401	12	59	1	0	0	0	0	0	0
2	9.83405	14	9.97016	26	0.02984	9.86389	12	58	2	1	1	0	0	0	0
3	9.83419	13	9.97042	25	0.02958	9.86377	11	57	3	1	1	1	1	1	1
4	9.83432	14	9.97067	25	0.02933	9.86366	12	56	4	2	2	1	1	1	1
5	9.83446	13	9.97092	26	0.02908	9.86354	12	55	5	2	2	1	1	1	1
6	9.83459	14	9.97118	25	0.02882	9.86342	12	54	6	3	2	1	1	1	1
7	9.83473	13	9.97143	25	0.02857	9.86330	12	53	7	3	3	2	2	1	1
8	9.83486	14	9.97168	25	0.02832	9.86318	12	52	8	3	3	2	2	2	1
9	9.83500	13	9.97193	26	0.02807	9.86306	11	51	9	4	4	2	2	2	2
10	9.83513	14	9.97219	25	0.02781	9.86295	12	50	10	4	4	2	2	2	2
11	9.83527	13	9.97244	25	0.02756	9.86283	12	49	11	5	5	3	2	2	2
12	9.83540	14	9.97269	26	0.02731	9.86271	12	48	12	5	5	3	3	2	2
13	9.83554	13	9.97295	25	0.02705	9.86259	12	47	13	6	5	3	3	3	2
14	9.83567	14	9.97320	25	0.02680	9.86247	12	46	14	6	6	3	3	3	3
15	9.83581	13	9.97345	26	0.02655	9.86235	12	45	15	6	6	3	3	3	3
16	9.83594	14	9.97371	25	0.02629	9.86223	12	44	16	7	7	4	3	3	3
17	9.83608	13	9.97396	25	0.02604	9.86211	11	43	17	7	7	4	4	3	3
18	9.83621	13	9.97421	26	0.02579	9.86200	12	42	18	8	7	4	4	4	3
19	9.83634	14	9.97447	25	0.02553	9.86188	12	41	19	8	8	4	4	4	3
20	9.83648	13	9.97472	25	0.02528	9.86176	12	40	20	9	8	5	4	4	4
21	9.83661	13	9.97497	26	0.02503	9.86164	12	39	21	9	9	5	5	4	4
22	9.83674	14	9.97523	25	0.02477	9.86152	12	38	22	10	9	5	5	4	4
23	9.83688	13	9.97548	25	0.02452	9.86140	12	37	23	10	10	5	5	5	4
24	9.83701	14	9.97573	25	0.02427	9.86128	12	36	24	10	10	6	5	5	4
25	9.83715	13	9.97598	26	0.02402	9.86116	12	35	25	11	10	6	5	5	5
26	9.83728	13	9.97624	25	0.02376	9.86104	12	34	26	11	11	6	6	5	5
27	9.83741	14	9.97649	25	0.02351	9.86092	12	33	27	12	11	6	6	5	5
28	9.83755	13	9.97674	26	0.02326	9.86080	12	32	28	12	12	7	6	6	5
29	9.83768	13	9.97700	25	0.02300	9.86068	12	31	29	13	12	7	6	6	5
30	9.83781	14	9.97725	25	0.02275	9.86056	12	30	30	13	12	7	6	6	5
31	9.83795	13	9.97750	26	0.02250	9.86044	12	29	31	13	13	7	7	6	6
32	9.83808	13	9.97776	25	0.02224	9.86032	12	28	32	14	13	7	7	6	6
33	9.83821	13	9.97801	25	0.02199	9.86020	12	27	33	14	14	8	7	7	6
34	9.83834	14	9.97826	25	0.02174	9.86008	12	26	34	15	14	8	7	7	6
35	9.83848	13	9.97851	26	0.02149	9.85996	12	25	35	15	15	8	8	7	6
36	9.83861	13	9.97877	25	0.02123	9.85984	12	24	36	16	15	8	8	7	7
37	9.83874	13	9.97902	25	0.02098	9.85972	12	23	37	16	15	9	8	7	7
38	9.83887	14	9.97927	26	0.02073	9.85960	12	22	38	16	16	9	8	8	7
39	9.83901	13	9.97953	25	0.02047	9.85948	12	21	39	17	16	9	8	8	7
40	9.83914	13	9.97978	25	0.02022	9.85936	12	20	40	17	17	9	9	8	7
41	9.83927	13	9.98003	26	0.01997	9.85924	12	19	41	18	17	10	9	8	8
42	9.83940	14	9.98029	25	0.01971	9.85912	12	18	42	18	17	10	9	8	8
43	9.83954	13	9.98054	25	0.01946	9.85900	12	17	43	19	18	10	9	9	8
44	9.83967	13	9.98079	25	0.01921	9.85888	12	16	44	19	18	10	10	9	8
45	9.83980	13	9.98104	26	0.01896	9.85876	12	15	45	19	19	10	10	9	8
46	9.83993	13	9.98130	25	0.01870	9.85864	13	14	46	20	19	11	10	9	8
47	9.84006	14	9.98155	25	0.01845	9.85851	12	13	47	20	20	11	10	9	9
48	9.84020	13	9.98180	26	0.01820	9.85839	12	12	48	21	20	11	10	10	9
49	9.84033	13	9.98206	25	0.01794	9.85827	12	11	49	21	20	11	11	10	9
50	9.84046	13	9.98231	25	0.01769	9.85815	12	10	50	22	21	12	11	10	9
51	9.84059	13	9.98256	25	0.01744	9.85803	12	9	51	22	21	12	11	10	9
52	9.84072	13	9.98281	26	0.01719	9.85791	12	8	52	23	22	12	11	10	10
53	9.84085	13	9.98307	25	0.01693	9.85779	13	7	53	23	22	12	11	11	10
54	9.84098	14	9.98332	25	0.01668	9.85766	12	6	54	23	22	13	12	11	10
55	9.84112	13	9.98357	26	0.01643	9.85754	12	5	55	24	23	13	12	11	10
56	9.84125	13	9.98383	25	0.01617	9.85742	12	4	56	24	23	13	12	11	10
57	9.84138	13	9.98408	25	0.01592	9.85730	12	3	57	25	24	13	12	11	10
58	9.84151	13	9.98433	25	0.01567	9.85718	12	2	58	25	24	14	13	12	11
59	9.84164	13	9.98458	26	0.01542	9.85706	13	1	59	26	25	14	13	12	11
60	9.84177		9.98484		0.01516	9.85693		0	60	26	25	14	13	12	11
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.					

′	Sin	d.	Tang	d.c.	Cotg	Cos	d.	′	″	P. P.					
										26	25	14	13	12	11
0	9 84177	13	9.98484	25	0.01516	9.85693	12	60							
1	9.84190	13	9.98509	25	0.01491	9.85681	12	59	1	0	0	0	0	0	0
2	9.84203	13	9.98534	26	0.01466	9.85669	12	58	2	1	1	0	0	0	0
3	9.84216	13	9.98560	25	0.01440	9.85657	12	57	3	1	1	1	1	1	1
4	9.84229	13	9.98585	25	0.01415	9.85645	13	56	4	2	2	1	1	1	1
5	9.84242	13	9.98610	25	0.01390	9.85632	12	55	5	2	2	1	1	1	1
6	9.84255	14	9.98635	26	0.01365	9.85620	12	54	6	3	2	1	1	1	1
7	9.84269	13	9.98661	25	0.01339	9.85608	12	53	7	3	3	2	2	1	1
8	9.84282	13	9.98686	25	0.01314	9.85596	13	52	8	3	3	2	2	2	1
9	9.84295	13	9.98711	26	0.01289	9.85583	12	51	9	4	4	2	2	2	2
10	9.84308	13	9.98737	25	0.01263	9.85571	12	50	10	4	4	2	2	2	2
11	9.84321	13	9.98762	25	0.01238	9.85559	12	49	11	5	5	3	2	2	2
12	9.84334	13	9.98787	25	0.01213	9.85547	13	48	12	5	5	3	3	2	2
13	9.84347	13	9.98812	26	0.01188	9.85534	12	47	13	6	5	3	3	3	2
14	9.84360	13	9.98838	25	0.01162	9.85522	12	46	14	6	6	3	3	3	3
15	9.84373	12	9.98863	25	0.01137	9.85510	13	45	15	6	6	3	3	3	3
16	9.84385	13	9.98888	25	0.01112	9.85497	12	44	16	7	7	4	3	3	3
17	9.84398	13	9.98913	26	0.01087	9.85485	12	43	17	7	7	4	4	3	3
18	9.84411	13	9.98939	25	0.01061	9.85473	13	42	18	8	7	4	4	4	3
19	9.84424	13	9.98964	25	0.01036	9.85460	12	41	19	8	8	4	4	4	3
20	9.84437	13	9.98989	26	0.01011	9.85448	12	40	20	9	8	5	4	4	4
21	9.84450	13	9.99015	25	0.00985	9.85436	13	39	21	9	9	5	5	4	4
22	9.84463	13	9.99040	25	0.00960	9.85423	12	38	22	10	9	5	5	4	4
23	9.84476	13	9.99065	25	0.00935	9.85411	12	37	23	10	10	5	5	5	4
24	9.84489	13	9.99090	26	0.00910	9.85399	13	36	24	10	10	6	5	5	4
25	9.84502	13	9.99116	25	0.00884	9.85386	12	35	25	11	10	6	5	5	5
26	9.84515	13	9.99141	25	0.00859	9.85374	13	34	26	11	11	6	6	5	5
27	9.84528	12	9.99166	25	0.00834	9.85361	12	33	27	12	11	6	6	5	5
28	9.84540	13	9.99191	26	0.00809	9.85349	12	32	28	12	12	7	6	6	5
29	9.84553	13	9.99217	25	0.00783	9.85337	13	31	29	13	12	7	6	6	5
30	9.84566	13	9.99242	25	0.00758	9.85324	12	30	30	13	12	7	6	6	5
31	9.84579	13	9.99267	26	0.00733	9.85312	13	29	31	13	13	7	7	6	6
32	9.84592	13	9.99293	25	0.00707	9.85299	12	28	32	14	13	7	7	6	6
33	9.84605	13	9.99318	25	0.00682	9.85287	13	27	33	14	14	8	7	7	6
34	9.84618	12	9.99343	25	0.00657	9.85274	12	26	34	15	14	8	7	7	6
35	9.84630	13	9.99368	26	0.00632	9.85262	12	25	35	15	15	8	8	7	6
36	9.84643	13	9.99394	25	0.00606	9.85250	13	24	36	16	15	8	8	7	7
37	9.84656	13	9.99419	25	0.00581	9.85237	12	23	37	16	15	9	8	7	7
38	9.84669	13	9.99444	25	0.00556	9.85225	13	22	38	16	16	9	8	8	7
39	9.84682	12	9.99469	26	0.00531	9.85212	12	21	39	17	16	9	8	8	7
40	9.84694	13	9.99495	25	0.00505	9.85200	13	20	40	17	17	9	9	8	7
41	9.84707	13	9.99520	25	0.00480	9.85187	12	19	41	18	17	10	9	8	8
42	9.84720	13	9.99545	25	0.00455	9.85175	13	18	42	18	17	10	9	8	8
43	9.84733	12	9.99570	26	0.00430	9.85162	12	17	43	19	18	10	9	9	8
44	9.84745	13	9.99596	25	0.00404	9.85150	13	16	44	19	18	10	10	9	8
45	9.84758	13	9.99621	25	0.00379	9.85137	12	15	45	19	19	10	10	9	8
46	9.84771	13	9.99646	26	0.00354	9.85125	13	14	46	20	19	11	10	9	8
47	9.84784	12	9.99672	25	0.00328	9.85112	12	13	47	20	20	11	10	9	9
48	9.84796	13	9.99697	25	0.00303	9.85100	13	12	48	21	20	11	10	10	9
49	9.84809	13	9.99722	25	0.00278	9.85087	13	11	49	21	20	11	11	10	9
50	9.84822	13	9.99747	26	0.00253	9.85074	12	10	50	22	21	12	11	10	9
51	9.84835	12	9.99773	25	0.00227	9.85062	13	9	51	22	21	12	11	10	9
52	9.84847	13	9.99798	25	0.00202	9.85049	12	8	52	23	22	12	11	10	10
53	9.84860	13	9.99823	25	0.00177	9.85037	13	7	53	23	22	12	11	11	10
54	9.84873	12	9.99848	26	0.00152	9.85024	12	6	54	23	22	13	12	11	10
55	9.84885	13	9.99874	25	0.00126	9.85012	13	5	55	24	23	13	12	11	10
56	9.84898	13	9.99899	25	0.00101	9.84999	13	4	56	24	23	13	12	11	10
57	9.84911	12	9.99924	25	0.00076	9.84986	12	3	57	25	24	13	12	11	10
58	9.84923	13	9.99949	26	0.00051	9.84974	13	2	58	25	24	14	13	12	11
59	9.84936	13	9.99975	25	0.00025	9.84961	12	1	59	26	25	14	13	12	11
60	9.84949		9.00000		0.00000	9.84949		0	60	26	25	14	13	12	11
′	Cos	d.	Cotg	d.c.	Tang	Sin	d.	′	″	P. P.					

III.

ТАБЛИЦА ДЛЯ ВЫЧИСЛЕНІЯ ЛОГАРИѲМА

СУММЫ ИЛИ РАЗНОСТИ ДВУХЪ ЧИСЕЛЪ,

ИЗВѢСТНЫХЪ ЕДИНСТВЕННО ПО ИХЪ ЛОГАРИѲМАМЪ.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.000	50	0.30103	50	50	0.30103	50	50	0.060	47	0.27207	47	47	0.33207	53	53
0.001	10 5,0	0.30053	50	1 1,0	0.30153	50	1 1,0	0.061	10 4,7	0.27160	46	1 1,1	0.33260	54	1 0,9
0.002	20 10,0	0.30003	50	2 2,0	0.30203	50	2 2,0	0.062	20 9,4	0.27114	47	2 2,3	0.33314	53	2 1,8
0.003	30 15,0	0.29953	50	3 3,0	0.30253	50	3 3,0	0.063	30 14,1	0.27067	46	3 3,4	0.33367	54	3 2,7
0.004	40 20,0	0.29903	49	4 4,0	0.30303	51	4 4,0	0.064	40 18,8	0.27021	47	4 4,5	0.33421	53	4 3,6
	50 25,0			5 5,0			5 5,0		50 23,5			5 5,6			5 4,4
	60 30,0			6 6,0			6 6,0		60 28,2			6 6,8			6 5,3
0.005	70 35,0	0.29854	50	7 7,0	0.30354	50	7 7,0	0.065	70 32,9	0.26974	46	7 7,9	0.33474	54	7 6,2
0.006	80 40,0	0.29804	50	8 8,0	0.30404	50	8 8,0	0.066	80 37,6	0.26928	46	8 9,0	0.33528	54	8 7,1
0.007	90 45,0	0.29754	49	9 9,0	0.30454	51	9 9,0	0.067	90 42,3	0.26882	46	9 10,1	0.33582	54	9 8,0
0.008		0.29705	50	10 10,0	0.30505	50	10 10,0	0.068		0.26836	46	10 11,3	0.33636	54	10 8,9
0.009		0.29655	49	20 20,0	0.30555	51	20 20,0	0.069		0.26790	46	20 22,6	0.33690	54	20 17,7
				30 30,0			30 30,0					30 33,8			30 26,6
0.010		0.29606	50	40 40,0	0.30606	50	40 40,0	0.070		0.26744	46	40 45,1	0.33744	54	40 35,5
0.011		0.29556	49		0.30656	51		0.071		0.26698	46		0.33798	54	50 44,3
0.012	49	0.29507	49		0.30707	51		0.072	46	0.26652	46		0.33852	54	
0.013	10 4,9	0.29458	49	49	0.30758	51	51	0.073	10 4,6	0.26606	46	46	0.33906	54	54
0.014	20 9,8	0.29409	50	1 1,0	0.30809	50	1 1,0	0.074	20 9,2	0.26560	45	1 1,2	0.33960	53	1 0,9
	30 14,7			2 2,1			2 1,9		30 13,8			2 2,3			2 1,7
0.015	40 19,6	0.29359	49	3 3,1	0.30859	51	3 2,9	0.075	40 18,4	0.26515	46	3 3,5	0.34015	54	3 2,6
0.016	50 24,5	0.29310	49	4 4,2	0.30910	51	4 3,8	0.076	50 23,0	0.26469	46	4 4,7	0.34069	54	4 3.4
0.017	60 29,4	0.29261	49	5 5,2	0.30961	51	5 4,8	0.077	60 27,6	0.26423	45	5 5,9	0.34123	55	5 4,3
0.018	70 34,3	0.29212	49	6 6,2	0.31012	51	6 5,7	0.078	70 32,2	0.26378	46	6 7,0	0.34178	54	6 5,1
0.019	80 39,2	0.29163	48	7 7,3	0.31063	52	7 6,7	0.079	80 36,8	0.26332	45	7 8,2	0.34232	55	7 6,0
	90 44,1			8 8,3			8 7,7		90 41,4			8 9,4			8 6,8
0.020		0.29115	49	9 9,4	0.31115	51	9 8,6	0 080		0.26287	45	9 10,6	0.34287	55	9 7,7
0.021		0.29066	49	10 10,4	0.31166	51	10 9,6	0.081		0.26242	46	10 11,7	0.34342	54	10 8,5
0.022		0.29017	49	20 20,8	0.31217	51	20 19.2	0.082		0.26196	45	20 23,5	0.34396	55	20 17,0
0.023		0.28968	48	30 31,2	0.31268	52	30 28,8	0.083		0.26151	45	30 35,2	0.34451	55	30 25,6
0.024		0.28920	49	40 41,6	0.31320	51	40 38,4	0.084		0.26106	45	40 47,0	0.34506	55	40 34,1
	48						50 48,0		45						50 42,6
0.025	10 4,8	0.28871	49	48	0.31371	51	52	0.085	10 4,5	0.26061	45	45	0.34561	55	55
0.026	20 9,6	0.28822	48	1 1,1	0.31422	52	1 0,9	0.086	20 9,0	0.26016	46	1 1,2	0.34616	54	1 0,8
0.027	30 14,4	0.28774	48	2 2,2	0.31474	52	2 1,8	0.087	30 13,5	0.25970	44	2 2,4	0.34670	56	2 1,6
0.028	40 19,2	0.28726	49	3 3,2	0.31526	51	3 2,8	0.088	40 18,0	0.25926	45	3 3,7	0.34726	55	3 2,5
0.029	50 24,0	0.28677	48	4 4,3	0.31577	52	4 3,7	0.089	50 22,5	0.25881	45	4 4,9	0.34781	55	4 3,3
	60 28,8			5 5,4			5 4,6		60 27,0			5 6,1			5 4,1
0.030	70 33,6	0.28629	48	6 6,5	0.31629	52	6 5,5	0.090	70 31,5	0.25836	45	6 7,3	0.34836	55	6 4,9
0 031	80 38,4	0.28581	49	7 7,6	0.31681	51	7 6,5	0.091	80 36,0	0.25791	45	7 8,6	0.34891	55	7 5,7
0.032	90 43,2	0.28532	48	8 8,7	0.31732	52	8 7,4	0.092	90 40,5	0.25746	45	8 9,8	0.34946	55	8 6,5
0.033		0.28484	48	9 9,7	0.31784	52	9 8,3	0.093		0.25701	44	9 11,0	0.35001	56	9 7.4
0 034		0.28436	48	10 10,8	0.31836	52	10 9,2	0.094		0.25657	45	10 12,2	0.35057	55	10 8,2
				20 21,7			20 18,5					20 24,4			20 16,4
0.035		0.28388	48	30 32,5	0.31888	52	30 27,7	0.095		0.25612	44	30 36,7	0.35112	56	30 24,5
0.036		0.28340	48	40 43,5	0.31940	52	40 36,9	0.096		0.25568	45	40 48,9	0.35168	55	40 32,7
0.037	47	0.28292	47		0.31992	53	50 46,2	0.097		0.25523	44		0.35223	56	50 40,9
0.038	10 4,7	0.28245	48	47	0.32045	52	53	0.098	44	0.25479	45	44	0.35279	55	56
0.039	20 9,4	0.28197	48	1 1,1	0.32097	52	1 0,9	0.099	10 4,4	0.25434	44	1 1,3	0.35334	56	1 0,8
	30 14,1			2 2,3			2 1,8		20 8,8			2 2,5			2 1,6
0.040	40 18,8	0.28149	48	3 3,4	0.32149	52	3 2,7		30 13,2			3 3,8			3 2,4
0.041	50 23,5	0 28101	47	4 4,5	0.32201	53	4 3,5	0.100	40 17,6	0.25390	44	4 5,1	0.35390	56	4 3,1
0.042	60 28,2	0.28054	48	5 5,6	0.32254	52	5 4,4	0.101	50 22,0	0.25346	44	5 6,4	0.35446	56	5 3,9
0.043	70 32,9	0.28006	47	6 6,8	0.32306	53	6 5,3	0.102	60 26,4	0.25302	44	6 7,6	0.35502	56	6 4,7
0.044	80 37,6	0.27959	48	7 7,9	0.32359	52	7 6,2	0.103	70 30,8	0.25258	44	7 8,9	0.35558	56	7 5,5
	90 42,3			8 9,0			8 7,1	0.104	80 35,2	0.25214	44	8 10,2	0.35614	56	8 6,3
0.045		0.27911	47	9 10,1	0.32411	53	9 8,0		90 39,6			9 11,5			9 7,1
0.046		0.27864	47	10 11,3	0.32464	53	10 8,9	0.105		0.25170	44	10 12,7	0.35670	56	10 7,9
0.047		0.27817	48	20 22,6	0.32517	52	20 17,7	0.106		0.25126	44	20 25,5	0.35726	56	20 15,7
0.048		0.27769	47	30 33,8	0.32569	53	30 26,6	0.107		0.25082	44	30 38,2	0.35782	56	30 23,6
0 049	46	0.27722	47	40 45,1	0.32622	53	40 35,5	0.108		0.25038	44	40 50,9	0.35838	56	40 31,4
	10 4,6						50 44,3	0.109		0.24994	44		0.35894	56	50 39.3
0.050	20 9,2	0.27675	47	46	0.32675	53	54		43			43			57
0.051	30 13,8	0.27628	47	1 1,2	0.32728	53	1 0,9	0.110	10 4,3	0.24950	43	1 1,3	0.35950	57	1 0,8
0.052	40 18,4	0.27581	47	2 2.3	0.32781	53	2 1,7	0.111	20 8,6	0.24907	44	2 2,7	0.36007	56	2 1,5
0.053	50 23,0	0.27534	47	3 3,5	0.32834	53	3 2,6	0.112	30 12,9	0.24863	44	3 4,0	0.36063	56	3 2,3
0.054	60 27,6	0.27487	47	4 4,7	0.32887	53	4 3,4	0.113	40 17,2	0.24819	43	4 5,3	0.36119	57	4 3,0
	70 32,2			5 5,9			5 4,3	0.114	50 21,5	0.24776	43	5 6,6	0.36176	57	5 3,8
0.055	80 36,8	0.27440	47	6 7,0	0.32940	53	6 5,1	0.115	60 25,8	0.24733	44	6 8,0	0.36233	56	6 4,5
0.056	90 41,4	0.27393	47	7 8,2	0.32993	53	7 6,0	0.116	70 30,1	0.24689	43	7 9,3	0.36289	57	7 5,3
0.057		0.27346	46	8 9,4	0.33046	54	8 6,8	0.117	80 34,4	0.24646	43	8 10,6	0.36346	57	8 6,0
0.058		0.27300	47	9 10,6	0.33100	53	9 7,7	0.118	90 38,7	0.24603	44	9 11,9	0.36403	56	9 6,8
0.059		0.27253	46	10 11,7	0.33153	54	10 8,5	0.119		0.24559	43	10 13,3	0.36459	57	10 7,5
				20 23,5			20 17,0					20 26,5			20 15,1
0.060		0.27207		30 35,2	0.33207		30 25,6	0.120		0.24516		30 39,8	0.36516		30 22,6
				40 47,0			40 34,1					40 53,0			40 30,2
							50 42,6								50 37,7
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d	P. P	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.120	44	0.24516	43	44	0.36516	57	56	0.180	40	0.22029	40	40	0.40029	60	60
0.121	10 4,4	0.24473	43	1 1,3	0.36573	57	1 0 8	0.181	10 4,0	0.21989	40	1 1,5	0.40089	60	1 0,7
0.122	20 8,8	0.24430	43	2 2,5	0.36630	57	2 1,6	0.182	20 8,0	0.21949	39	2 3,0	0.40149	61	2 1,3
0.123	30 13,2	0.24387	43	3 3,8	0.36687	57	3 2,4	0.183	30 12,0	0.21910	40	3 4,5	0.40210	60	3 2,0
0.124	40 17,6	0.24344	43	4 5,1	0.36744	57	4 3,1	0.184	40 16,0	0.21870	39	4 6,0	0.40270	61	4 2 7
	50 22,0			5 6,4			5 3,9		50 20,0			5 7,5			5 3,3
0.125	60 26,4	0.24301	43	6 7 6	0.36801	57	6 4,7	0.185	60 24,0	0.21831	40	6 9,0	0.40331	60	6 4 0
0.126	70 30,8	0.24258	42	7 8,9	0.36858	58	7 5,5	0.186	70 28,0	0.21791	39	7 10,5	0.40391	61	7 4,7
0.127	80 35,2	0.24216	43	8 10,2	0.36916	57	8 6,3	0.187	80 32,0	0.21752	40	8 12,0	0.40452	60	8 5,3
	90 39,6			9 11,5			9 7,1		90 36,0			9 13,5			9 6,0
0.128		0.24173	43	10 12,7	0.36973	57	10 7,9	0.188		0.21712	39	10 15,0	0.40512	61	10 6,7
0.129		0.24130	42	20 25,5	0.37030	57	20 15,7	0.189		0.21673	39	20 30,0	0 40573	61	20 13,5
				30 38,2		58	30 23,6					30 45,0			30 20,0
0.130		0.24088	43	40 50,9	0.37088	57	40 31,4	0.190		0.21634	39		0.40634	61	40 26,7
0.131		0.24045	42		0.37145	58	50 39,3	0.191		0.21595	39		0.40695	61	50 33,3
0.132	43	0.24003	43	43	0.37203	57	57	0.192	39	0.21556	40	39	0.40756	60	61
0.133	10 4,3	0.23960	42	1 1,3	0.37260	58	1 0,8	0.193	10 3,9	0.21516	39	1 1,6	0.40816	61	1 0,6
0.134	20 8,6	0.23918	43	2 2,7	0.37318	57	2 1,5	.0194	20 7,8	0.21477	39	2 3,1	0.40877	61	2 1,3
	30 12,9			3 4,0			3 2,3		30 11,7			3 4,7			3 1,9
	40 17,2			4 5,3			4 3,0		40 15,6			4 6,3			4 2,6
0.135	50 21,5	0.23875	42	5 6,6	0.37375	58	5 3,8	0.195	50 19,5	0.21438	39	5 7,8	0.40938	61	5 3,2
0.136	60 25,8	0.23833	42	6 8,0	0.37433	58	6 4,5	0.196	60 23,4	0.21399	38	6 9.4	0.40999	62	6 3,8
0.137	70 30,1	0.23791	42	7 9,3	0.37491	58	7 5,3	0.197	70 27,3	0.21361	39	7 10,9	0.41061	61	7 4,5
0.138	80 34,4	0.23749	42	8 10,6	0.37549	58	8 6,0	0 198	80 31,2	0 21322	39	8 12,5	0.41122	61	8 5,1
0.139	90 38,7	0.23707	42	9 11,9	0.37607	58	9 6,8	0.199	90 35,1	0.21283	39	9 14,1	0.41183	61	9 5,8
				10 13,3			10 7,5					10 15,6			10 6,4
0.140		0.23665	42	20 26,5	0.37665	58	20 15,1	0.200		0.21244	38	20 31,3	0.41244	62	20 12,8
0.141		0.23623	42	30 39,8	0.37723	58	30 22,6	0.201		0.21206	39	30 46,9	0.41306	61	30 19,2
0.142		0.23581	42	40 53,0	0.37781	58	40 30,2	0.202		0.21167	39		0.41367	61	40 25,6
0.143		0.23539	42		0.37839	58	50 37,7	0.203		0 21128	38		0.41428	62	50 32,0
0.144	42	0.23497	42	42	0.37897	58	58	0.204	38	0.21090	38	38	0 41490	62	60 38,4
0.145	10 4,2	0.23455	41	1 1,4	0.37955	59	1 0,7	0 205	10 3,8	0.21052	39	1 1,6	0 41552	61	62
0.146	20 8,4	0.23414	42	2 2,8	0.38014	58	2 1,4	0.20	20 7,6	0.21013	38	2 3,3	0.41613	62	1 0,6
0.147	30 12,6	0.23372	42	3 4,1	0.38072	58	3 2,2	0.207	30 11,4	0.20975	38	3 4,9	0.41675	62	2 1,2
0.148	40 16,8	0.23330	41	4 5,5	0.38130	59	4 2,9	0.208	40 15,2	0.20937	39	4 6,5	0.41737	61	3 1,8
0.149	50 21,0	0.23289	42	5 6,9	0.38189	58	5 3,6	0.209	50 19,0	0.20898	38	5 8 2	0.41798	62	4 2,5
	60 25,2			6 8,3			6 4,3		60 22,8			6 9,8			5 3,1
	70 29,4			7 9,7			7 5,1		70 26,6			7 11,4			6 3,7
0.150	80 33,6	0.23247	41	8 11,0	0.38247	59	8 5,8	0.210	80 30,4	0.20860	38	8 13,1	0.41860	62	7 4,3
0.151	90 37,8	0.23206	41	9 12,4	0.38306	59	9 6,5	0.211	90 34,2	0.20822	38	9 14,7	0.41922	62	8 4,9
0.152		0.23165	42	10 13,8	0.38365	58	10 7,2	0.212		0.20784	38	10 16,3	0.41984	62	9 5,5
0.153		0.23123	41	20 27,6	0.38423	59	20 14,5	0 213		0.20746	38	20 32 6	0.42046	62	10 6,1
0.154		0.23082	41	30 41,4	0.38482	59	30 21,7	0.214		0.20708	38	30 48,9	0.42108	62	20 12,3
				40 55.3			40 29,0								30 18,4
0.155		0.23041	41		0.38541	59	50 36.2	0.215		0.20670	38		0.42170	62	40 24,5
0.156	41	0.23000	41	41	0.38600	59	59	0 216	37	0.20632	38	37	0.42232	62	50 30.6
0.157	10 4,1	0.22959	41	1 1.1	0.38659	59	1 0,7	0.217	10 3,7	0.20594	37	1 1,7	0.42294	63	60 36.8
0.158	20 8,2	0.22918	41	2 2,9	0.38718	59	2 1,4	0.218	20 7,4	0.20557	38	2 3,4	0.42357	62	63
0.159	30 12,3	0.22877	41	3 4,3	0.38777	59	3 2,1	0.219	30 11,1	0.20519	38	3 5,1	0.42419	62	1 0,6
	40 16,4			4 5,8			4 2 8		40 14,8			4 6,8			2 1,2
0.160	50 20,5	0.22836	41	5 7.2	0.38836	59	5 3.5	0.220	50 18,5	0.20481	37	5 8.5	0 42481	63	3 1,8
0.161	60 24,6	0.22795	41	6 8.6	0.38895	59	6 4,2	0 221	60 22,2	0.20444	38	6 10 2	0 42544	62	4 2 3
0.162	70 28,7	0.22754	41	7 10,1	0.38954	59	7 4,9	0.222	70 25,9	0.20406	37	7 11,9	0.42606	63	5 2 9
	80 32,8			8 11,5			8 5,6		80 29,6			8 13,6			6 3,5
0.163	90 36,9	0.22713	40	9 13.0	0.39013	60	9 6 3	0.223	90 33.3	0.20369	38	9 15,3	0.42669	62	7 4 1
0.164		0.22673	41	10 14.4	0.39073	59	10 6,9	0.224		0.20331	37	10 17,0	0.42731	63	8 4,7
				20 28,8			20 13,9					20 34,1			9 5,3
0.165		0.22632	41	30 43,2	0.39132	59	30 20,8	0.225		0.20294	37	30 51,1	0.42794	63	10 5,9
0.166		0.22591	40	40 57,6	0.39191	60	40 27,8	0.226		0.20257	37		0.42857	63	20 11,7
0.167		0.22551	41		0.39251	59	50 34.7	0.227		0.20220	38		0.42920	62	30 17,6
0.168	40	0.22510	40	40	0.39310	60	60	0.228	36	0.20182	37	36	0.42982	63	40 23,5
0.169	10 4,0	0.22470	40	1 1,5	0.39370	60	1 0,7	0.229	10 3.6	0.20145	37	1 1,8	0.43045	63	50 29,4
0.170	20 8,0	0.22430	41	2 3,0	0.39430	59	2 1,3	0.230	20 7,2	0.20108	37	2 3.6	0.43108	63	60 35.2
0.171	30 12 0	0.22389	40	3 4.5	0.39489	60	3 2,0	0.231	30 10,8	0 20071	37	3 5,3	0.43171	63	64
0.172	40 16,0	0.22349	40	4 6,0	0.39549	60	4 2,7	0.232	40 14,4	0.20034	37	4 7,1	0 43234	63	1 0,6
0.173	50 20,0	0.22309	40	5 7,5	0.39609	60	5 3,3	0.233	50 18.0	0.19997	37	5 8,9	0 43297	63	2 1,1
0.174	60 24.0	0.22269	40	6 9 0	0.39669	60	6 4.0	0.234	60 21 6	0.19960	37	6 10,7	0.43360	63	3 1,7
	70 28,0			7 10.5			7 4,7		70 25,2			7 12,4			4 2.2
	80 32.0			8 12.0			8 5.3		80 28 8			8 14,2			5 2,8
0.175	90 36,0	0.22229	40	9 13,5	0 39729	60	9 6,0	0 235	90 32.4	0.19923	36	9 16.0	0.43423	64	6 3,4
0.176		0.22189	40	10 15.0	0.39789	60	10 6,7	0.236		0.19887	37	10 17.8	0.43487	63	7 3,9
0.177		0.22149	40	20 30,0	0.39849	60	20 13,3	0.237		0.19850	37	20 35,6	0 43550	63	8 4,5
0.178		0.22109	40	30 45.0	0.39909	60	30 20,0	0.238		0.19813	36	30 53,3	0.43613	64	9 5,1
0.179		0.22069	40		0.39969	60	40 26,7	0.239		0.19777	37		0.43677	63	10 5,6
							50 33,3								20 11,2
0.180		0.22029			0.40029			0.240		0.19740			0.43740		30 16,9
															40 22,5
															50 28,1
															60 33,7
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.240	37	0.19740	..	37	0.43740	64	63
0.241	10 3,7	0.19704	36	1 1,7	0.43804	63	1 0,6
0.242	20 7,4	0.19667	37	2 3,4	0.43867	64	2 1,2
0.243	30 11,1	0.19631	36	3 5,1	0.43931	64	3 1,8
0.244	40 14,8	0.19595	36	4 6,8	0.43995	63	4 2,3
	50 18,5		37	5 8,5			5 2,9
0.245	60 22,2	0.19558	36	6 10,2	0.44058	64	6 3,5
0.246	70 25,9	0.19522	36	7 11,9	0.44122	64	7 4,1
0.247	80 29,6	0.19486	36	8 13,6	0.44186	64	8 4,7
0.248	90 33,3	0.19450	36	9 15,3	0.44250	64	9 5,3
0.249		0.19414	36	10 17,0	0.44314	64	10 5,9
				20 34,1			20 11,7
0.250		0.19378		30 51,1	0.44378		30 17,6
0.251		0.19342	36		0.44442	64	40 23,5
0.252		0.19306	36		0.44506	64	50 29,4
0.253		0.19270	36		0.44570	64	60 35,2
0.254		0.19234	36		0.44634	64	
0.255	36	0.19198		36	0.44698	65	64
0.256	10 3,6	0.19163	35	1 1,8	0.44763	64	1 0,6
0.257	20 7,2	0.19127	36	2 3,6	0.44827	64	2 1,1
0.258	30 10,8	0.19091	36	3 5,3	0.44891	65	3 1,7
0.259	40 14,4	0.19056	35	4 7,1	0.44956	64	4 2,2
	50 18,0		36	5 8,9			5 2,8
0.260	60 21,6	0.19020		6 10,7	0.45020		6 3,4
0.261	70 25,2	0.18985	35	7 12,4	0.45085	65	7 3,9
0.262	80 28,8	0.18949	36	8 14,2	0.45149	64	8 4,5
0.263	90 32,4	0.18914	35	9 16,0	0.45214	65	9 5,1
0.264		0.18879	35	10 17,8	0.45279	65	10 5,6
			35	20 35,6		65	20 11,2
0.265		0.18844		30 53,5	0.45344		30 16,9
0.266		0.18808	36		0.45408	64	40 22,5
0.267		0.18773	35		0.45473	65	50 28,1
0.268		0.18738	35		0.45538	65	60 33,7
0.269		0.18703	35		0.45603	65	
			35				65
0.270	35	0.18668		35	0.45668	65	
0.271	10 3,5	0.18633	35	1 1,9	0.45733	66	1 0,5
0.272	20 7,0	0.18599	34	2 3,7	0.45799	65	2 1,1
0.273	30 10,5	0.18564	35	3 5,6	0.45864	65	3 1,6
0.274	40 14,0	0.18529	35	4 7,4	0.45929	65	4 2,2
	50 17,5		35	5 9,3			5 2,7
0.275	60 21,0	0.18494		6 11,1	0.45994		6 3,2
0.276	70 24,5	0.18460	34	7 13,0	0.46060	66	7 3,8
0.277	80 28,0	0.18425	35	8 14,9	0.46125	65	8 4,3
0.278	90 31,5	0.18390	35	9 16,7	0.46190	65	9 4,8
0.279		0.18356	34	10 18,6	0.46256	66	10 5,4
			34	20 37,1		66	20 10,8
0.280		0.18322		30 55,7	0.46322		30 16,2
0.281		0.18287	35		0.46387	65	40 21,5
0.282		0.18253	34		0.46453	66	50 26,9
0.283		0.18218	35		0.46518	65	60 32,3
0.284		0.18184	34		0.46584	66	
			34			66	
0.285	34	0.18150		34	0.46650	66	66
0.286	10 3,4	0.18116	34	1 1,9	0.46716	66	1 0,5
0.287	20 6,8	0.18082	34	2 3,9	0.46782	66	2 1,0
0.288	30 10,2	0.18048	34	3 5,8	0.46848	66	3 1,5
0.289	40 13,6	0.18014	34	4 7,8	0.46914	66	4 2,1
	50 17,0		34	5 9,7		66	5 2,6
0.290	60 20,4	0.17980		6 11,6	0.46980		6 3,1
0.291	70 23,8	0.17946	34	7 13,6	0.47046	66	7 3,6
0.292	80 27,2	0.17912	34	8 15,5	0.47112	66	8 4,1
0.293	90 30,6	0.17878	34	9 17,5	0.47178	66	9 4,6
0.294		0.17845	33	10 19,4	0.47245	67	10 5,1
			34	20 38,8		66	20 10,3
0.295		0.17811		30 58,2	0.47311		30 15,5
0.296		0.17777	34		0.47377	66	40 20,6
0.297		0.17744	33		0.47444	67	50 25,8
0.298		0.17710	34		0.47510	66	60 30,9
0.299		0.17677	33		0.47577	67	
			34			66	
0.300		0.17643			0.47643		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.300	33	0.17643	33	33	0 47643	67	67
0.301	10 3,3	0.17610	33	1 2,0	0.47710	67	1 0,5
0.302	20 6,6	0.17577	33	2 4,1	0.47777	67	2 1,0
0.303	30 9,9	0.17544	34	3 6,1	0 47844	67	3 1,5
0.304	40 13,2	0.17510	33	4 8,1	0 47910	66	4 2,0
	50 16,5			5 10,2		67	5 2,5
0.305	60 19,8	0.17477	33	6 12,2	0.47977		6 3,0
0.306	70 23,1	0.17444	33	7 14,2	0.48044	67	7 3,4
0.307	80 26,4	0.17411	33	8 16,2	0.48111	67	8 3,9
0.308	90 29,7	0.17378	33	9 18,3	0.48178	67	9 4,4
0.309		0.17345	33	10 20,3	0.48245	67	10 4,9
				20 40,6		67	20 9,9
0.310		0.17312		30 60,9	0.48312		30 14,8
0 311		0.17279	32		0.48379	67	40 19,7
0.312		0.17247	33		0.48447	68	50 24,6
0.313		0.17214	33		0.48514	67	60 29,6
0.314		0.17181	33		0.48581	67	
						67	
0.315	32	0.17148		32	0.48348		68
0.316	10 3,2	0.17116	32	1 2,1	0.48716	68	1 0,5
0.317	20 6,4	0.17083	33	2 4,2	0.48783	67	2 0,9
0.318	30 9,6	0.17051	32	3 6,4	0.48851	68	3 1,4
0.319	40 12,8	0.17018	33	4 8,5	0.48918	67	4 1,9
	50 16,0		32	5 10,6		68	5 2,4
0.320	60 19,2	0.16986		6 12,7	0.48986		6 2,8
0 321	70 22,4	0.16954	32	7 14,9	0.49054	68	7 3,3
0 322	80 25,6	0.16921	33	8 17,0	0.49121	67	8 3,8
0.323	90 28,8	0.16889	32	9 19,1	0.49189	68	9 4,2
0.324		0.16857	32	10 21,2	0.49257	68	10 4,7
			32	20 42,5		68	20 9,4
0.325		0.16825		30 63,7	0.49325		30 14,1
0.326		0.16793	32		0.49393	68	40 18,8
0.327		0.16761	32		0.49461	68	50 23,5
0.328		0.16729	32		0.49529	68	60 28,2
0.329		0.16697	32		0.49597	68	
			32			68	
0.330	31	0.16665		31	0.49665		69
0.331	10 3,1	0.16633	32	1 2,2	0.49733	68	1 0,4
0.332	20 6,2	0.16601	32	2 4,5	0.49801	68	2 0,9
0.333	30 9,3	0.16569	32	3 6,7	0.49869	68	3 1,3
0.334	40 12,4	0.16538	31	4 8,9	0.49938	69	4 1,8
	50 15,5		32	5 11,1		68	5 2,3
0.335	60 18,6	0.16506		6 13,4	0.50006		6 2,7
0.336	70 21,7	0.16474	32	7 15,6	0.50074	68	7 3,1
0.337	80 24,8	0.16443	31	8 17,8	0.50143	69	8 3,6
0.338	90 27,9	0.16411	32	9 20,0	0.50211	68	9 4,0
0.339		0.16380	31	10 22,3	0.50280	69	10 4,5
			31	20 44,5		69	20 9,0
0.340		0.16349		30 66,8	0.50349		30 13,5
0.341		0.16317	32		0.50417	68	40 18,0
0.342		0.16286	31		0.50486	69	50 22,5
0.343		0.16255	32		0.50555	69	60 27,0
0.344		0.16224	31		0.50624	69	
			32			68	
0.345	30	0.16192		30	0.50692	69	70
0.346	10 3,0	0.16161	31	1 2,3	0.50761	69	1 0,4
0.347	20 6,0	0.16130	31	2 4,7	0.50830	69	2 0,9
0 348	30 9,0	0.16099	31	3 7,0	0.50899	69	3 1,3
0.349	40 12,0	0.16068	31	4 9,3	0.50968	69	4 1,7
	50 15,0		31	5 11,7		69	5 2,1
0.350	60 18,0	0.16037		6 14,0	0.51037		6 2,6
0.351	70 21,0	0.16007	30	7 16,3	0.51107	70	7 3,0
0.352	80 24,0	0.15976	31	8 18,7	0.51176	69	8 3,4
0.353	90 27,0	0.15945	31	9 21,0	0.51245	69	9 3,9
0.354		0.15914	31	10 23,3	0.51314	69	10 4,3
			30	20 46,7		70	20 8,6
0.355		0.15884			0.51384		30 12,9
0.356		0.15853	31		0.51453	69	40 17,1
0.357		0.15822	31		0.51522	69	50 21,4
0.358		0.15792	30		0.51592	70	60 25,7
0.359		0.15761	31		0.51661	69	
			30			70	
0.360		0.15731			0.51731		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.360	31	0.15731	30	31	0.51731	70	69	0.420	28	0.13994	28	28	0.55994	72	72
0.361	10 3,1	0.15701	31	1 2,2	0.51801	69	1 0,7	0.421	10 2,8	0 13966	27	1 2,6	0.56066	73	1 0,4
0.362	20 6,2	0.15670	30	2 4,5	0.51870	70	2 0,9	0.422	20 5,6	0 13939	28	2 5,1	0.56139	72	2 0,8
0.363	30 9,3	0.15640	30	3 6,7	0.51940	70	3 1,3	0.423	30 8,4	0.43911	27	3 7,7	0.56211	73	3 1,2
0.364	40 12,4	0.15610	30	4 8,9	0.52010	70	4 1,8	0.424	40 11,2	0.13884	27	4 10,3	0.56284	73	1 1,6
	50 15,5			5 11,1			5 2,2		50 14,0			5 12,9			5 1,9
0.365	60 18,6	0.15580	30	6 13.4	0.52080	70	6 2,7	0.425	60 16 8	0.13857	28	6 15,4	0.56357	72	6 2,3
0 366	70 21,7	0.15550	30	7 15 6	0.52150	70	7 3,1	0.426	70 19,6	0.13829	27	7 18,0	0.56429	73	7 2,7
0.367	80 24,8	0.15520	31	8 17,8	0.52220	69	8 3,6	0.427	80 22,4	0.13802	27	8 20.6	0.56502	73	8 3,1
	90 27,9			9 20 0			9 4,0		90 25,2			9 23,1			9 3,5
0.368		0.15489	29	10 22,3	0.52289	71	10 4,5	0.428		0.13775	27	10 25,7	0.56575	73	10 3,9
0.369		0.15460	30	20 44,5	0.52360	70	20 9,0	0.429		0.13748	27	20 51,4	0.56648	73	20 7,8
				30 66,8			30 13,5								30 11,7
0.370		0 15430	30		0.52430	70	40 18,0	0.430		0.13721	27		0 56721	73	40 15,6
0.371		0.15400	30		0.52500	70	50 22,5	0.431		0.13694	27		0.56794	73	50 19,4
0.372		0.15370	30		0.52570	70	60 27,0	0.432		0.13667	27		0.56867	73	60 23,3
0.373		0.15340	30		0.52640	70		0.433		0.13640	27		0.56940	73	70 27 2
0.374		0.15310	29		0.52710	71		0.434		0.13613	27		0.57013	73	
0.375	30	0.15281	30	30	0.52781	70	70	0.435	27	0.13586	27	27	0.57086	73	73
0.376	10 3,0	0.15251	30	1 2,3	0.52851	70	1 0,7	0.436	10 2,7	0.13559	27	1 2,7	0.57159	73	1 0,5
0.377	20 6,0	0.15221	29	2 4,7	0.52921	71	2 0,9	0.437	20 5,4	0.13532	27	2 5,4	0.57232	73	2 0,7
0.378	30 9,0	0.15192	30	3 7,0	0.52992	70	3 1,3	0.438	30 8,1	0 13505	26	3 8,1	0.57305	74	3 1,1
0 379	40 12,0	0.15162	29	4 9,3	0.53062	71	4 1,7	0.439	40 10,8	0.13479	27	4 10,8	0.57379	73	4 1,5
	50 15,0			5 11,7			5 2,1		50 13,5			5 13,6			5 1,8
0.380	60 18,0	0.15133		6 14,0	0.53133	71	6 2,6	0.440	60 16,2	0.13452	27	6 16,2	0.57452	73	6 2,2
0.381	70 21,0	0.15104	29	7 16,3	0.53204	70	7 3,0	0.441	70 18,9	0.13425	26	7 18,9	0.57525	74	7 2,6
0.382	80 24,0	0.15074	30	8 18,7	0.53274	71	8 3,4	0.442	80 21,6	0.13399	27	8 21,6	0.57599	73	8 3,0
0.383	90 27,0	0.15045	29	9 21,0	0.53345	71	9 3,9	0.443	90 24,3	0.13372	26	9 24 3	0.57672	74	9 3,3
0.384		0.15016	29	10 23,3	0.53416	70	10 4,3	0.444		0.13346	27	10 27 0	0.57746	73	10 3,7
			30	20 46,7			20 8 6					20 54,1			20 7,4
0.385		0.14986			0.53486		30 12,9	0.445		0 13319	26		0.57819	74	30 11,1
0.386		0.14957	29		0.53557	71	40 17,1	0.446		0.13293	26		0.57893	74	40 14,8
0.387		0.14928	29		0.53628	71	50 21,4	0.447		0.13267	26		0.57967	73	50 18,5
0.388		0.14899	29		0.53699	71	60 25,7	0.448		0 13240	26		0.58040	74	60 22,2
0.389		0.14870	29		0.53770	71		0.449		0.13214	26		0.58 14	74	70 25,9
0.390	29	0.14841	29	29	0.53841	71	71	0.450	26	0.13188	26	26	0.58188	74	74
0.391	10 2,9	0.14812	29	1 2,4	0 53912	71	1 0,7	0.451	10 2,6	0.13162	26	1 2 8	0.58262	74	1 0,5
0.392	20 5,8	0.14783	28	2 4,9	0.53983	72	2 0,8	0.452	20 5.2	0.13136	26	2 5,7	0 58336	74	2 0,7
0.393	30 8,7	0.14755	29	3 7,3	0.54055	71	3 1,2	0.453	30 7.8	0.13110	26	3 8,5	0.58410	74	3 1,1
0 394	40 11,6	0.14726	29	4 9,8	0.54126	71	4 1,6	0.454	40 10,4	0.13084	26	4 11,4	0.58 84	74	4 1,4
	50 14,5			5 12,2			5 2,0		50 13,0			5 14,2			5 1,8
0.395	60 17,4	0.14697		6 14,7	0.54197		6 2,5	0.455	60 15,6	0.13058		6 17,1	0.58558		6 2 1
0.396	70 20,3	0.14668	29	7 17,1	0.54268	71	7 2,9	0.456	70 18.2	0.13032	26	7 19,9	0.58632	74	7 2,5
0.397	80 23,2	0.14640	28	8 19,6	0.54340	72	8 3,3	0.457	80 20,8	0.13006	26	8 22,8	0.58706	74	8 2,8
0.398	90 26,1	0.14611	29	9 22,0	0.54411	71	9 3,7	0.458	90 23,4	0.12980	26	9 25,6	0.58780	74	9 3.2
0.399		0.14583	28	10 24,5	0.54483	72	10 4,1	0.459		0.12954	26	10 28,5	0 58854	74	10 3,5
			29	20 49,0		71	20 8,2				25	20 56,9			20 7,0
0.400		0.14554			0.54554		30 12,3	0 460		0.12928			0.58928		30 10,5
0.401		0.14526	28		0 54626	72	40 16,3	0 461		0.12903	26		0.59003	75	40 14.1
0.402		0.14497	29		0.54697	71	50 20,4	0.462		0.12877	26		0.59077	74	50 17,6
0.403		0.14469	28		0.54769	72	60 24,5	0.463		0 12851	25		0 59151	74	60 21.1
0.404		0.14441	28		0.54841	72	70 28,6	0.464		0 12826	26		0.59226	75	70 24,6
			29			71					25			74	
0.405	28	0.14412	28	28	0.54912	72	72	0.465	25	0.12800	26	25	0 59300	75	75
0.406	10 2,8	0.14384	28	1 2,6	0.54984	72	1 0,7	0.466	10 2,5	0.12775	25	1 3,0	0 59375	74	1 0,5
0.407	20 5,6	0.14356	28	2 5,1	0 55056	72	2 0,8	0.467	20 5,0	0.12749	26	2 6,0	0 59449	75	2 0,7
0.408	30 8,4	0.14328	28	3 7,7	0.55128	72	3 1,2	0.468	30 7,5	0.12724	25	3 9,0	0.59524	74	3 1,0
0.409	40 11,2	0.14300	28	4 10,3	0.55200	72	4 1,6	0.469	40 10,0	0.12698	25	4 12,0	0.59598	75	4 1,7
	50 14.0			5 12,9			5 1,9		50 12,5			5 15,0			5 1,5
0.410	60 16,8	0.14272		6 15,4	0 55272		6 2,3	0.470	60 15,0	0.12673		6 18,0	0.59673		6 2,0
0.411	70 19.6	0.14244	28	7 18,0	0.55344	72	7 2,7	0 471	70 17,5	0.12648	26	7 21,0	0.59748	75	7 2.3
0.412	80 22.4	0.14216	28	8 20,6	0.55416	72	8 3,1	0.472	80 20,0	0.12622	25	8 24,0	0.59822	74	8 2,7
0.413	90 25,2	0.14188	28	9 23.1	0.55488	72	9 3,5	0.473	90 22,5	0.12597	25	9 27,0	0.59897	75	9 3,0
0.414		0.14160	28	10 25,7	0.55560	72	10 3,9	0.474		0.12572	25	10 30.0	0.59972	75	10 3,3
			28	20 51,4		72	20 7,8				25	20 60,0		75	20 6,7
0.415		0.14132			0.55632		30 11,7	0.475		0.12547			0.60047		30 10,0
0.416		0.14104	28		0.55704	72	40 15 6	0.476		0.12522	25		0.60122	75	40 13,3
0.417		0.14077	27		0.55777	73	50 19,4	0.477		0.12497	25		0.60197	75	50 16,7
0.418		0.14049	28		0.55849	72	60 23,3	0.478		0.12472	25		0.60272	75	60 20,0
0.419		0.14021	28		0.55921	72	70 27,2	0.479		0.12447	25		0.60347	75	70 23,3
			27			73								75	
0.420		0.13994			0.55994			0.480		0.12422			0.60422		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.480	25	0.12422	25	25	0.60122	75	75
0.481	3 1	0.12397	25	1 3	0.60197	75	2 1
0.482	7 2	0.12372	24	2 6	0.60272	76	5 2
0.483	11 3	0.12348	25	3 9	0.60348	75	8 3
0.484	15 4	0.12323	25	4 12	0.60423	75	11 4
	19 5			5 15			14 5
0.485	23 6	0.12298	24	6 18	0.60498	76	17 6
0.486	27 7	0.12274	25	7 21	0.60574	75	20 7
0.487	31 8	0.12249	25	8 24	0.60649	75	23 8
0.488	35 9	0.12224	24	9 27	0.60724	75	26 9
0.489	39 10	0.12200	25	10 30	0.60800	76	29 10
	43 11			11 33			32 11
0.490	47 12	0.12175	24	12 36	0.60875	75	35 12
0.491	51 13	0.12151	24	13 39	0.60951	76	38 13
0.492	55 14	0.12127	25	14 42	0.61026	75	41 14
0.493	59 15	0.12102	24	15 45	0.61102	76	44 15
0.494	63 16	0.12078	24	16 48	0.61177	75	47 16
	67 17			17 51			50 17
0.495	71 18	0.12054	24	18 54	0.61253	76	53 18
0.496	75 19	0.12030	24	19 57	0.61329	76	56 19
0.497	79 20	0.12005	25	20 60	0.61404	75	59 20
0.498	83 21	0.11981	24	21 63	0.61480	76	62 21
0.499	87 22	0.11957	24	22 66	0.61555	75	65 22
	91 23			23 69			68 23
0.500	95 24	0.11933	24	24 72	0.61631	76	71 24
0.501	99 25	0.11909	24	25 75	0.61707	76	74 25
0.502	24	0.11885	24	24	0.61782	75	76
0.503	3 1	0.11861	24	1 3	0.61858	76	2 1
0.504	7 2	0.11837	23	2 6	0.61933	76	5 2
	11 3			3 9			8 3
0.505	15 4	0.11814	24	4 12	0.62009	76	11 4
0.506	19 5	0.11790	24	5 15	0.62085	76	14 5
0.507	23 6	0.11766	24	6 18	0.62161	76	17 6
0.508	28 7	0.11742	23	7 21	0.62237	77	20 7
0.509	32 8	0.11719	24	8 24	0.62314	76	23 8
	36 9			9 27			26 9
0.510	40 10	0.11695	24	10 30	0.62390	76	29 10
0.511	44 11	0.11671	23	11 33	0.62466	76	32 11
0.512	48 12	0.11648	24	12 36	0.62542	77	35 12
0.513	53 13	0.11624	23	13 39	0.62619	76	38 13
0.514	57 14	0.11601	24	14 42	0.62695	76	41 14
	61 15			15 45			44 15
0.515	65 16	0.11577	23	16 48	0.62771	77	47 16
0.516	69 17	0.11554	23	17 51	0.62848	76	50 17
0.517	73 18	0.11531	24	18 54	0.62924	77	53 18
0.518	78 19	0.11507	23	19 57	0.63001	76	56 19
0.519	82 20	0.11484	23	20 60	0.63077	77	59 20
	86 21			21 63			62 21
0.520	90 22	0.11461	23	22 66	0.63154	77	65 22
0 521	94 23	0.11438	23	23 69	0.63231	76	68 23
0.522	98 24	0.11415	23	24 72	0.63307	77	71 24
0.523	23	0.11392	23	25 75	0.63384	77	74 25
0.524	3 1	0.11368	24	23	0.63461	77	77
	7 2			1 3			2 1
0.525	11 3	0.11345	23	2 6	0.63538	77	6 2
0.526	16 4	0.11323	22	3 9	0.63615	77	9 3
0.527	20 5	0.11300	23	4 12	0.63693	76	12 4
0.528	24 6	0.11277	23	5 15	0.63768	77	16 5
0.529	29 7	0.11254	23	6 18	0.63845	78	19 6
	33 8			7 21			22 7
0.530	37 9	0.11231	23	8 24	0.63923	77	26 8
0.531	42 10	0.11208	22	9 27	0.64000	77	29 9
0.532	46 11	0.11186	23	10 30	0.64077	77	32 10
0.533	51 12	0.11163	23	11 33	0.64154	77	36 11
0.534	55 13	0.11140	22	12 36	0.64231	77	39 12
	59 14			13 39			42 13
0.535	64 15	0.11118	23	14 42	0.64308	78	46 14
0.536	68 16	0.11095	22	15 45	0.64386	77	49 15
0.537	72 17	0.11073	23	16 48	0.64463	77	52 16
0.538	77 18	0.11050	22	17 51	0.64540	78	56 17
0.539	81 19	0.11028	23	18 54	0.64618	77	59 18
	85 20			19 57			62 19
0 540	90 21	0.11005	22	20 60	0.64695	78	66 20
	94 22			21 63	0.64773	77	69 21
	98 23			22 66	0.64850	78	72 22
				23 69	0.64928	77	76 23
				24 72			
				25 75	0.65005		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P	C.	d.	P. P.
0.540	22	0.11005	22	22	0.65005	78	78
0.541	3 1	0.10983	23	1 4	0.65083	77	3 1
0.542	7 2	0.10960	22	2 8	0.65160	78	6 2
0.543	11 3	0.10938	22	3 12	0.65238	78	9 3
0.544	16 4	0.10916	22	4 16	0.65316	78	13 4
	21 5			5 20			16 5
0.545	26 6	0.10894	22	6 24	0.65394	78	19 6
0.546	30 7	0.10872	23	7 28	0.65472	77	22 7
0.547	35 8	0.10849	22	8 32	0.65549	78	25 8
0.548	39 9	0.10827	22	9 36	0.65627	78	28 9
0.549	44 10	0.10805	22	10 40	0.65705	78	31 10
	48 11			11 44			34 11
0.550	53 12	0.10783	22	12 48	0.65783	78	38 12
0.551	57 13	0.10761	22	13 52	0.65861	78	41 13
0.552	62 14	0.10739	21	14 56	0.65939	78	44 14
0.553	66 15	0.10718	22	15 60	0.66018	79	47 15
0.554	71 16	0.10696	22	16 64	0.66096	78	50 16
	76 17			17 68			53 17
0 555	80 18	0.10674	22	18 72	0.66174	78	56 18
0.556	85 19	0.10652	22	19 76	0.66252	78	59 19
0.557	89 20	0.10630	21	20 80	0.66330	79	62 20
0.558	94 21	0.10609	22		0.66409	78	65 21
0.559	98 22	0.10587	22		0.66487	78	68 22
0.560		0.10565	21		0.66565	79	71 23
0.561	21	0.10544	22	21	0.66644	78	74 24
0.562	3 1	0.10522	21	1 4	0.66722	79	77 25
0.563	8 2	0.10501	22	2 8	0.66801	78	79
0.564	12 3	0.10479	21	3 12	0.66879	79	2 1
	17 4			4 16			6 2
0.565	22 5	0.10458	21	5 20	0.66958	79	10 3
0.566	27 6	0.10437	22	6 24	0.67037	78	14 4
0.567	31 7	0.10415	21	7 28	0.67115	79	17 5
0.568	36 8	0.10394	21	8 32	0.67194	79	21 6
0 569	41 9	0.10373	22	9 36	0.67273	78	25 7
	46 10			10 40			29 8
0.570	51 11	0.10351	21	11 44	0.67351	79	32 9
0.571	55 12	0.10330	21	12 48	0.67430	79	36 10
0.572	60 13	0.10309	21	13 52	0.67509	79	40 11
0.573	65 14	0.10288	21	14 56	0.67588	79	44 12
0.574	70 15	0.10267	21	15 60	0.67667	79	48 13
	74 16			16 64			51 14
0.575	79 17	0.10246	21	17 68	0.67746	79	55 15
0.576	84 18	0.10225	21	18 72	0.67825	79	59 16
0.577	89 19	0.10204	21	19 76	0.67904	79	63 17
0.578	93 20	0.10183	21	20 80	0.67983	79	66 18
0.579	98 21	0.10162	21		0.68062	79	70 19
0.580		0.10141	21		0.68141	79	74 20
0.581	20	0.10120	20	20	0 68220	80	78 21
0.582	3 1	0.10100	21	1 4	0.68300	79	80
0.583	8 2	0.10079	21	2 8	0 68379	79	3 1
0.584	13 3	0.10058	20	3 12	0 68458	80	7 2
	18 4			4 16			11 3
0.585	23 5	0.10038	21	5 20	0.68538	79	15 4
0 586	28 6	0.10017	21	6 24	0.68617	79	19 5
0.587	33 7	0 09996	20	7 28	0 68696	80	23 6
0 588	38 8	0.09976	21	8 32	0.68776	79	27 7
0.589	43 9	0.09955	20	9 36	0.68855	80	31 8
	48 10			10 40			35 9
0.590	53 11	0.09935	21	11 44	0 68935	79	39 10
0.591	58 12	0.09914	20	12 48	0.69014	80	43 11
0.592	63 13	0.09894	20	13 52	0.69094	80	47 12
0.593	68 14	0.09874	21	14 56	0.69174	80	51 13
0.594	73 15	0.09853	20	15 60	0.69253	79	55 14
	78 16			16 64			59 15
0.595	83 17	0.09833	20	17 68	0.69333	80	63 16
0.596	88 18	0.09813	20	18 72	0.69413	80	67 17
0.597	93 19	0.09793	20	19 76	0 69493	80	71 18
0.598	98 20	0.09773	21	20 80	0.69573	80	75 19
0.599		0.09752	20		0·69652	79	79 20
0.600		0.09732			0.69732	80	
A.	P. P.	B.	d	P. P	C	d.	P P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.600	20	0.09732	20	20	0.69732	80	80
0.601	3 1	0.09712	20	1 4	0.69812	80	3 1
0.602	8 2	0.09692	20	2 8	0.69892	80	7 2
0.603	13 3	0.09672	20	3 12	0.69972	80	11 3
0.604	18 4	0.09652	20	4 16	0.70052	80	15 4
0.605	23 5	0.09632	20	5 20	0.70132	80	19 5
0.606	28 6	0.09612	19	6 24	0.70212	81	23 6
0.607	33 7	0.09593	20	7 28	0.70293	80	27 7
0.608	38 8	0.09573	20	8 32	0.70373	80	31 8
0.609	43 9	0.09553	20	9 36	0.70453	80	35 9
0.610	48 10	0.09533	19	10 40	0.70533	81	39 10
0.611	53 11	0.09514	20	11 44	0.70614	80	43 11
0.612	58 12	0.09494	20	12 48	0.70694	80	47 12
0.613	63 13	0.09474	19	13 52	0.70774	81	51 13
0.614	68 14	0.09455	20	14 56	0.70855	80	55 14
0.615	73 15	0.09435	19	15 60	0.70935	81	59 15
0.616	78 16	0.09416	20	16 64	0.71016	80	63 16
0.617	83 17	0.09396	19	17 68	0.71096	81	67 17
0.618	88 18	0.09377	20	18 72	0.71177	80	71 18
0.619	93 19	0.09357	19	19 76	0.71257	81	75 19
0.620	98 20	0.09338	19	20 80	0.71338	81	79 20
0.621		0.09319	20		0.71419	80	
0.622	19	0.09299	19	19	0.71499	81	81
0.623	3 1	0.09280	19	1 4	0.71580	81	3 1
0.624	8 2	0.09261	19	2 9	0.71661	81	7 2
0.625	14 3	0.09242	19	3 13	0.71742	81	11 3
0.626	19 4	0.09223	19	4 17	0.71823	81	15 4
0.627	24 5	0.09204	20	5 21	0.71904	80	20 5
0.628	29 6	0.09184	19	6 26	0.71984	81	24 6
0.629	35 7	0.09165	19	7 30	0.72065	81	28 7
0.630	40 8	0.09146	19	8 34	0.72146	81	32 8
0.631	45 9	0.09127	19	9 38	0.72227	81	37 9
0.632	51 10	0.09108	18	10 43	0.72308	82	41 10
0.633	56 11	0.09090	19	11 47	0.72390	81	45 11
0.634	61 12	0.09071	19	12 51	0.72471	81	50 12
0.635	66 13	0.09052	19	13 55	0.72552	81	54 13
0.636	72 14	0.09033	19	14 60	0.72633	81	58 14
0.637	77 15	0.09014	18	15 64	0.72714	82	62 15
0.638	82 16	0.08996	19	16 68	0.72796	81	67 16
0.639	87 17	0.08977	19	17 72	0.72877	81	71 17
0.640	93 18	0.08958	18	18 77	0 72958	82	75 18
0.641	98 19	0.08940	19	19 81	0.73040	81	79 19
0.642	18	0.08921	19	18	0.73121	81	82
0.643	3 1	0.08902	18	1 5	0.73202	82	3 1
0.644	9 2	0.08884	19	2 9	0.73284	81	7 2
0.645	14 3	0.08865	18	3 14	0.73365	82	12 3
0.646	20 4	0.08847	18	4 18	0 73447	82	16 4
0.647	26 5	0.08829	19	5 23	0.73529	82	21 5
0.648	31 6	0.08810	18	6 27	0.73610	81	26 6
0.649	37 7	0.08792	18	7 32	0.73692	82	30 7
0.650	42 8	0.08774	19	8 36	0.73774	82	35 8
0.651	48 9	0.08755	18	9 41	0.73855	81	39 9
0.652	53 10	0.08737	18	10 46	0.73937	82	44 10
0.653	59 11	0.08719	18	11 50	0.74019	82	48 11
0.654	64 12	0.08701	18	12 55	0.74101	82	53 12
0.655	70 13	0.08683	19	13 59	0.74183	81	57 13
0.656	76 14	0.08664	18	14 64	0 74264	82	62 14
0.657	81 15	0.08646	18	15 68	0.74346	82	67 15
0.658	87 16	0.08628	18	16 73	0.74428	82	71 16
0.659	92 17	0.08610	18	17 77	0 74510	82	76 17
0.660	98 18	0.08592		18 82	0.74592		80 18

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.660	18	0.08592	18	18	0.74592	82	82
0.661	3 1	0.08574	17	1 5	0.74674	83	3 1
0 662	9 2	0.08557	18	2 9	0 74757	82	7 2
0.663	14 3	0.08539	18	3 14	0.74839	82	12 3
0.664	20 4	0.08521	18	4 18	0.74921	82	16 4
0.665	26 5	0.08503	18	5 23	0.75003	82	21 5
0 666	31 6	0.08485	17	6 27	0.75085	83	26 6
0 667	37 7	0.08468	18	7 32	0.75168	82	30 7
0.668	42 8	0 08450	18	8 36	0.75250	82	35 8
0.669	48 9	0.08432	17	9 41	0.75332	82	39 9
0.670	53 10	0.08415	18	10 46	0.75415	83	44 10
0.671	59 11	0.08397	18	11 50	0.75497	82	48 11
0.672	64 12	0.08379	17	12 55	0.75579	82	53 12
0 675	70 13	0.08362	18	13 59	0.75662	83	57 13
0.674	76 14	0.08344	17	14 64	0.75744	82	62 14
0 675	81 15	0.08327	18	15 68	0.75827	83	67 15
0.676	87 16	0.08309	17	16 73	0.75909	82	71 16
0.677	92 17	0.08292	17	17 77	0.75992	83	76 17
0.678	98 18	0.08275	18	18 82	0.76075	83	80 18
0.679		0.08257	17		0.76157	82	
0.680		0 08240	17		0.76240	83	
0.681	17	0.08223	17	17	0.76323	83	83
0.682	3 1	0.08206	18	1 5	0.76406	82	3 1
0.683	9 2	0.08188	17	2 10	0.76488	83	8 2
0.684	15 3	0.08171	17	3 15	0.76571	83	13 3
0.685	21 4	0.08154	17	4 20	0.76654	83	18 4
0.686	27 5	0.08137	17	5 24	0.76737	83	22 5
0.687	33 6	0.08120	17	6 29	0.76820	83	27 6
0.688	39 7	0.08103	17	7 34	0 76903	83	32 7
0.689	45 8	0.08086	17	8 39	0.76986	83	37 8
0.690	51 9	0.08069	17	9 44	0.77069	83	42 9
0 691	56 10	0 08052	17	10 49	0.77152	83	47 10
0.692	62 11	0.08035	17	11 54	0.77235	83	52 11
0.693	68 12	0.08018	17	12 59	0.77318	83	57 12
0.694	74 13	0.08001	16	13 63	0.77401	84	62 13
0.695	80 14	0.07985	17	14 68	0.77485	83	66 14
0.696	86 15	0.07968	17	15 73	0.77568	83	71 15
0.697	92 16	0.07951	17	16 78	0.77651	83	76 16
0.698	98 17	0.07934	16	17 83	0.77734	84	81 17
0.699		0.07918	17		0.77818	83	
0.700		0 07901	17		0.77901	83	
0.701		0.07884	16		0.77984	84	
0.702	16	0.07868	17	16	0.78068	83	84
0.703	4 1	0.07851	16	1 5	0.78151	84	3 1
0.704	10 2	0 07835	17	2 10	0.78235	83	8 2
0.705	16 3	0.07818	16	3 16	0.78318	84	14 3
0.706	22 4	0.07802	17	4 21	0.78402	84	19 4
0.707	29 5	0.07785	16	5 26	0.78485	83	24 5
0.708	35 6	0 07769	16	6 31	0.78569	84	29 6
0.709	41 7	0.07753	17	7 37	0.78653	84	35 7
0.710	47 8	0.07736	16	8 42	0.78736	83	40 8
0.711	54 9	0.07720	16	9 47	0.78820	84	45 9
0.712	60 10	0.07704	17	10 52	0.78904	84	50 10
0 713	66 11	0.07687	16	11 58	0.78987	83	56 11
0.714	72 12	0.07671	16	12 63	0.79071	84	61 12
0.715	79 13	0.07655	16	13 68	0.79155	84	66 13
0.716	85 14	0.07639	16	14 73	0.79239	84	71 14
0 717	91 15	0.07623	16	15 79	0.79323	84	77 15
0.718	97 16	0 07607	16	16 84	0.79407	84	82 16
0.719		0.07591	16		0 79491	84	
0.720		0.07575			0.79575		

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.720	16	0.07575	16	16	0.79575	84	84
0.721	4 1	0.07559	16	1 5	0.79659	84	3 1
0.722	10 2	0.07543	16	2 10	0.79743	84	8 2
0.723	16 3	0.07527	16	3 16	0.79827	84	14 3
0.724	22 4	0.07511	16	4 21	0.79911	84	19 4
	29 5			5 26			24 5
0.725	35 6	0.07495	16	6 31	0.79995	84	29 6
0.726	41 7	0.07479	16	7 37	0.80079	84	35 7
0.727	47 8	0.07463	15	8 42	0.80163	85	40 8
0.728	54 9	0.07448	16	9 47	0.80248	84	45 9
0.729	60 10	0.07432	16	10 52	0.80332	84	50 10
0.730	66 11	0.07416	16	11 58	0.80416	84	56 11
0.731	72 12	0.07400	15	12 63	0.80500	85	61 12
0.732	79 13	0.07385	16	13 68	0.80585	84	66 13
0.733	85 14	0.07369	15	14 73	0.80669	85	71 14
0.734	91 15	0.07354	16	15 79	0.80754	84	77 15
	97 16			16 84			82 16
0.735		0.07338	16		0.80838	84	
0.736		0.07322	15		0.80922	85	
0.737		0.07307	16		0.81007	84	
0.738		0.07291	15		0.81091	85	
0.739		0.07276	15		0.81176	85	
0.740		0.07261	16		0.81261	84	
0.741	15	0.07245	15	15	0.81345	85	85
0.742	4 1	0.07230	15	1 6	0.81430	85	3 1
0.743	11 2	0.07215	16	2 11	0.81515	84	9 2
0.744	17 3	0.07199	15	3 17	0.81599	85	15 3
0.745	24 4	0.07184	15	4 23	0.81684	85	20 4
0.746	31 5	0.07169	15	5 28	0.81769	85	26 5
0.747	37 6	0.07154	16	6 34	0.81854	84	32 6
0.748	44 7	0.07138	15	7 40	0.81938	85	37 7
0.749	51 8	0.07123	15	8 45	0.82023	85	43 8
	57 9			9 51			49 9
0.750	64 10	0.07108	15	10 57	0 82108	85	54 10
0.751	71 11	0.07093	15	11 62	0.82193	85	60 11
0.752	77 12	0.07078	15	12 68	0.82278	85	66 12
0.753	84 13	0.07063	15	13 74	0.82363	85	71 13
0.754	91 14	0.07048	15	14 79	0.82448	85	77 14
0.755	97 15	0.07033	15	15 85	0.82533	85	83 15
0.756		0.07018	15		0.82618	85	
0.757		0.07003	15		0.82703	85	
0.758		0.06988	15		0.82788	85	
0.759		0 06973	14		0.82873	86	
0.760		0.06959	15		0.82959	85	
0.761		0.06944	15		0.83044	85	
0.762	14	0.06929	15	14	0.83129	85	86
0.763	4 1	0.06914	14	1 6	0.83214	85	4 1
0.764	11 2	0.06900	15	2 12	0.83300	86	10 2
	18 3			3 18			16 3
0.765	26 4	0.06885	15	4 25	0.83385	85	22 4
0.766	33 5	0.06870	14	5 31	0.83470	86	28 5
0.767	40 6	0.06856	15	6 37	0.83556	85	34 6
0.768	47 7	0.06841	14	7 43	0.83641	86	40 7
0.769	54 8	0.06827	15	8 49	0.83727	85	47 8
0.770	61 9	0.06812	14	9 55	0.83812	85	53 9
0.771	68 10	0.06798	15	10 61	0.83898	86	59 10
0.772	76 11	0.06783	14	11 68	0.83983	85	65 11
0.773	83 12	0.06769	15	12 74	0.84069	86	71 12
0.774	90 13	0.06754	14	13 80	0.84154	86	77 13
	97 14			14 86			83 14
0.775		0.06740	15		0.84240	85	
0.776		0.06725	14		0 84325	86	
0.777		0.06711	14		0.84411	86	
0.778		0.06697	14		0.84497	86	
0.779		0.06683	15		0.84583	85	
0.780		0.06668			0.84668		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.780	14	0.06668	14	14	0.84668	86	86
0.781	4 1	0.06654	14	1 6	0.84754	86	4 1
0.782	11 2	0.06640	14	2 12	0.84840	86	10 2
0.783	18 3	0.06626	14	3 18	0.84926	86	16 3
0.784	26 4	0.06612	15	4 25	0.85012	86	22 4
	33 5			5 31		85	28 5
0.785	40 6	0.06597	14	6 37	0.85097	86	34 6
0.786	47 7	0.06583	14	7 43	0.85183	86	40 7
0.787	54 8	0.06569	14	8 49	0.85269	86	47 8
0.788	61 9	0.06555	14	9 55	0.85355	86	53 9
0.789	68 10	0.06541	14	10 61	0.85441	86	59 10
0.790	76 11	0.06527	14	11 68	0.85527	86	65 11
0.791	83 12	0.06513	13	12 74	0.85613	87	71 12
0.792	90 13	0.06500	14	13 80	0 85700	86	77 13
0.793	97 14	0.06486	14	14 86	0.85786	86	83 14
0.794		0.06472	14		0.85872	86	
0.795		0.06458	14		0.85958	86	
0.796		0.06444	14		0.86044	86	
0.797		0.06430	13		0.86130	87	
0.798		0.06417	14		0.86217	86	
0.799		0.06403	14		0.86303	86	
0.800		0.06389	13		0.86389	87	
0.801		0.06376	14		0.86476	86	
0.802	13	0.06362	14	13	0.86562	86	87
0.803	4 1	0.06348	13	1 7	0.86648	87	4 1
0.804	12 2	0.06335	14	2 13	0.86735	86	11 2
	20 3			3 20			17 3
0.805	27 4	0.06321	13	4 27	0.86821	87	24 4
0.806	35 5	0.06308	14	5 33	0.86908	86	31 5
0.807	43 6	0 06294	13	6 40	0.86994	87	37 6
0.808	51 7	0.06281	14	7 47	0.87081	86	44 7
0.809	58 8	0.06267	13	8 54	0.87167	87	51 8
	66 9			9 60			57 9
0.810	74 10	0.06254	14	10 67	0.87254	86	64 10
0.811	81 11	0.06240	13	11 74	0.87340	87	71 11
0.812	89 12	0.06227	13	12 80	0.87427	87	77 12
0.813	97 13	0.06214	14	13 87	0.87514	86	84 13
0.814		0.06200	13		0.87600	87	
0.815		0.06187	13		0.87687	87	
0.816		0.06174	13		0.87774	87	
0.817		0.06161	14		0.87861	86	
0.818		0.06147	13		0.87947	87	
0.819		0.06134	13		0.88034	87	
0.820		0.06121	13		0.88121	87	
0.821		0.06108	13		0.88208	87	
0.822	12	0.06095	13	12	0.88295	87	88
0.823	5 1	0.06082	13	1 7	0.88382	87	4 1
0.824	13 2	0.06069	13	2 15	0.88469	87	12 2
	21 3			3 22			19 3
0.825	30 4	0.06056	13	4 29	0.88556	87	26 4
0.826	38 5	0.06043	13	5 37	0.88643	87	34 5
0.827	46 6	0.06030	13	6 44	0.88730	87	41 6
0.828	55 7	0.06017	13	7 51	0.88817	87	48 7
0.829	63 8	0.06004	13	8 59	0.88904	87	56 8
0.830	71 9	0.05991	13	9 66	0.88991	87	63 9
0.831	80 10	0 05978	13	10 73	0.89078	87	70 10
0,832	88 11	0.05965	13	11 81	0.89165	87	78 11
0.833	96 12	0.05952	13	12 88	0.89252	87	85 12
0.834		0.05939	12		0.89339	88	
0.835		0.05927	13		0.89427	87	
0.836		0.05914	13		0.89514	87	
0.837		0.05901	12		0.89601	88	
0.838		0.05889	13		0.89689	87	
0.839		0.05876	13		0.89776	87	
0.840		0.05863			0.89863		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.840	13	0.05863	12	13	0.89863	88	87
0.841	4 1	0.05851	13	1 7	0.89951	87	4 1
0.842	12 2	0.05838	13	2 13	0.90038	87	11 2
0.843	20 3	0.05825	12	3 20	0.90125	88	17 3
0.844	27 4	0.05813	13	4 27	0.90213	87	24 4
0.845	35 5	0.05800	12	5 33	0.90300	88	31 5
0.846	43 6	0.05788	13	6 40	0.90388	87	37 6
0.847	51 7	0.05775	12	7 47	0.90475	88	44 7
0.848	58 8	0 05763	12	8 54	0.90563	88	51 8
0.849	66 9	0.05751	13	9 60	0.90651	87	57 9
0.850	74 10	0.05738	12	10 67	0 90738	88	64 10
0 851	81 11	0.05726	12	11 74	0.90826	88	71 11
0.852	89 12	0.05714	13	12 80	0.90914	87	77 12
0.853	97 13	0.05701	12	13 87	0.91001	88	84 13
0.854		0.05689	12		0.91089	88	
0.855		0.05677	13		0.91177	87	
0.856		0.05664	12		0.91264	88	
0.857		0 05652	12		0.91352	88	
0.858		0.05640	12		0.91440	88	
0.859		0.05628	12		0.91528	88	
0.860		0.05616	12		0.91616	88	
0.861	12	0.05604	13	12	0.91704	87	88
0.862	5 1	0.05591	12	1 7	0.91791	88	4 1
0.863	13 2	0.05579	12	2 15	0.91879	88	12 2
0.864	21 3	0.05567	12	3 22	0.91967	88	19 3
0.865	30 4	0.05555	12	4 29	0.92055	88	26 4
0.866	38 5	0.05543	12	5 37	0.92143	88	34 5
0.867	46 6	0.05531	12	6 44	0.92231	88	41 6
0.868	55 7	0.05519	11	7 51	0.92319	89	48 7
0.869	63 8	0.05508	12	8 59	0.92408	88	56 8
0.870	71 9	0.05496	12	9 66	0.92496	88	63 9
0.871	80 10	0.05484	12	10 73	0.92584	88	70 10
0.872	88 11	0.05472	12	11 81	0.92672	88	78 11
0.873	66 12	0.05460	12	12 88	0.92760	88	85 12
0.874		0.05448	12		0.92848	88	
0.875		0.05436	11		0.92936	89	
0.876		0.05425	12		0.93025	88	
0.877		0.05413	12		0.93113	88	
0.878		0.05401	11		0.93201	89	
0.879		0.05390	12		0.93290	88	
0.880		0.05378	12		0.93378	88	
0.881		0.05366	11		0.93466	89	
0.882	11	0.05355	12	11	0.93555	88	89
0.683	5 1	0.05343	11	1 8	0.93643	89	5 1
0.884	14 2	0.05332	12	2 16	0.93732	88	13 2
0.885	23 3	0.05320	12	3 24	0.93820	88	21 3
0.886	32 4	0.05308	11	4 32	0.93908	89	29 4
0.887	41 5	0.05297	11	5 40	0.93997	89	37 5
0.888	51 6	0.05286	12	6 49	0.94086	88	45 6
0.889	60 7	0.05274	11	7 57	0.94174	89	53 7
0.890	69 8	0.05263	12	8 65	0.94263	88	61 8
0.891	78 9	0.05251	11	9 73	0.94351	89	69 9
0.892	87 10	0.05240	11	10 81	0.94440	89	77 10
0.893	96 11	0.05229	12	11 89	0.94529	88	85 11
0.894		0.05217	11		0.94617	89	
0.895		0.05206	11		0.94706	89	
0.896		0.05195	12		0.94795	88	
0.897		0.05183	11		0.94883	89	
0.898		0.05172	11		0.94972	89	
0 899		0.05161	11		0.95061	89	
0.900		0.05150			0.95150		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.900	11	0.05150	11	11	0 95150	89	89
0.901	5 1	0.05139	12	1 8	0.95239	88	5 1
0.902	14 2	0.05127	11	2 16	0.95327	89	13 2
0.903	23 3	0.05116	11	3 24	0.95416	89	21 3
0.904	32 4	0.05105	11	4 32	0.95505	89	29 4
0.905	41 5	0.05094	11	5 40	0.95594	89	37 5
0.906	51 6	0.05083	11	6 49	0.95683	89	45 6
0.907	60 7	0.05072	11	7 57	0.95772	89	53 7
0.908	69 8	0.05061	11	8 65	0.95861	89	61 8
0.909	78 9	0.05050	11	9 73	0.95950	89	69 9
0.910	87 10	0.05039	11	10 81	0.96039	89	77 10
0.911	96 11	0.05028	11	11 89	0.96128	89	85 11
0.912		0.05017	11		0.96217	89	
0.913		0.05006	11		0.96306	89	
0.914		0.04995	10		0.96395	90	
0.915		0.04985	11		0.96485	89	
0.916		0.04974	11		0.96574	89	
0.917		0.04963	11		0.96663	89	
0.918		0.04952	11		0.96752	89	
0.919		0.04949	10		0.96841	90	
0.920		0.04931	11		0.96931	89	
0.921	10	0.04920	11	10	0.97020	89	90
0.922	6 1	0.04909	11	1 9	0.97109	89	5 1
0.923	16 2	0.04898	10	2 18	0.97198	89	14 2
0.924	26 3	0.04888	11	3 27	0.97288	90	23 3
0.925	36 4	0.04877	10	4 36	0.97377	89	32 4
0.926	46 5	0.04867	11	5 45	0.97467	90	41 5
0.927	56 6	0.04856	11	6 54	0.97556	89	50 6
0.928	66 7	0.04845	10	7 63	0.97645	89	59 7
0.929	76 8	0.04835	11	8 72	0.97735	90	68 8
0.930	86 9	0.04824	10	9 81	0.97824	89	77 9
0.931	96 10	0.04814	11	10 90	0.97914	90	86 10
0.932		0.04803	10		0.98003	89	
0.933		0.04793	11		0 98093	90	
0.954		0.04782	10		0.98182	89	
0.935		0.04772	10		0.98272	90	
0 936		0.04762	11		0.98362	90	
0.937		0.04751	10		0.98451	89	
0.938		0.04741	10		0.98541	90	
0.939		0.04731	11		0.98631	90	
0.940		0.04720	10		0.98720	89	
0.941		0.04710	10		0.98810	90	
0.942	9	0.04700	11	9	0.98900	90	91
0.943	6 1	0.04689	10	1 10	0.98989	89	6 1
0 944	17 2	0.04679	10	2 20	0.99079	90	16 2
0.945	28 3	0.04669	10	3 30	0.99166	90	26 3
0.946	39 4	0.04659	10	4 40	0.99259	90	36 4
0.947	51 5	0.04649	10	5 51	0.99349	90	46 5
0.948	62 6	0.04639	11	6 61	0.99439	90	56 6
0.949	73 7	0.04628	10	7 71	0.99528	90	66 7
0.950	84 8	0.04618	10	8 81	0.99618	89	76 8
0.951	95 9	0.04608	10	9 91	0.99708	90	86 9
0.952		0.04598	10		0.99798	90	
0.953		0.04588	10		0.99888	90	
0.954		0.04578	10		0.99978	90	
0.955		0.04568	10		1.00068	90	
0 956		0.04558	10		1.00158	90	
0.957		0.04548	10		1.00248	90	
0.958		0.04538	10		1.00338	90	
0.959		0.04528	9		1.00428	91	
0.960		0.04519			1.00519		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
0.960	10	0.04519	10	10	1.00519	90	90
0.961	6 1	0.04509	10	1 9	1.00609	90	5 1
0.962	16 2	0.04499	10	2 18	1.00699	90	14 2
0.963	26 3	0.01489	10	3 27	1.00789	90	23 3
0.964	36 4	0.04479	10	4 36	1.00879	90	32 4
	46 5			5 45			41 5
0.965	56 6	0.04469	9	6 54	1.00969	91	50 6
0.966	66 7	0.01460	10	7 63	1.01060	90	59 7
0.967	76 8	0.04450	10	8 72	1.01150	90	68 8
0.968	86 9	0.04440	10	9 81	1.01240	90	77 9
0.969	96 10	0.04430	9	10 90	1.01330	91	86 10
0.970		0.04422	10		1.01421	90	
0.971		0.04411	10		1.01511	90	
0.972		0.04401	9		1.01601	91	
0.973		0.04392	10		1.01692	90	
0.974		0.04382	9		1.01782	91	
0.975		0.04373	10		1.01873	90	
0.976		0.04363	10		1.01963	90	
0.977		0.04353	9		1.02053	91	
0.978		0.04344	10		1.02144	90	
0.979		0.04334	9		1.02234	91	
0.980		0 04325	10		1.02325	90	
0.981		0 04315	9		1.02415	91	
0.982	9	0.04306	9	9	1.02506	91	91
0.983	6 1	0.04297	10	1 10	1.02597	90	6 1
0.984	17 2	0 04287	9	2 20	1.02687	91	16 2
	28 3			3 30			26 3
0.985	39 4	0 04278	10	4 40	1.02778	90	36 4
0.986	51 5	0.04268	9	5 51	1.02868	91	46 5
0.987	62 6	0.04259	9	6 61	1.02959	91	56 6
0.988	73 7	0.04250	10	7 71	1.03050	90	66 7
0.989	84 8	0 04240	9	8 81	1.03140	91	76 8
	95 9			9 91			86 9
0.990		0.04231	9		1.03231	91	
0.991		0.04222	9		1.03322	91	
0.992		0.04213	10		1.03413	90	
0.993		0.04203	9		1 03503	91	
0.994		0.04194	9		1.03594	91	
0.995		0.04185	9		1.03685	91	
0.996		0.04176	9		1.03776	91	
0.997		0.04167	10		1.03867	90	
0.998		0.04157	9		1.03957	91	
0.999		0.04148	9		1.04048	91	
1.000		0.04139	9		1.04139	91	
1.001		0.04130	9		1.04230	91	
1.002	8	0.04121	9	8	1.04321	91	92
1.003	7 1	0.04112	9	1 11	1.04412	91	6 1
1.004	19 2	0.04103	9	2 23	1.04503	91	18 2
	32 3			3 34			29 3
1.005	44 4	0.04094	9	4 46	1.04594	91	41 4
1.003	57 5	0.04085	9	5 57	1.04685	91	52 5
1.007	69 6	0.04076	9	6 69	1.04776	91	64 6
1.008	82 7	0.04067	9	7 80	1.04867	91	75 7
1.009	94 8	0.04058	9	8 92	1.04958	91	87 8
1.010		0.04049	9		1.05049	91	
1.011		0.04040	8		1.05140	92	
1.012		0.04032	9		1.05232	91	
1.013		0.04023	9		1.05323	91	
1.014		0.04014	9		1.05414	91	
1.015		0 04005	9		1.05505	91	
1.016		0.03996	9		1.05596	91	
1.017		0.03987	8		1.05687	92	
1.018		0.03979	9		1.05779	91	
1.019		0.03970	9		1.05870	91	
1.020		0.03961			1.05961		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P P.
1.020	9	0.03961	8	9	1.05961	92	91
1.021	6 1	0.03953	9	1 10	1.06053	91	6 1
1.022	17 2	0.03944	9	2 20	1.06144	91	16 2
1.023	28 3	0.03935	9	3 30	1.06235	91	26 3
1.024	39 4	0.03926	8	4 40	1.06326	92	36 4
	51 5			5 51			46 5
1.025	62 6	0 03918	9	6 61	1.06418	91	56 6
1.026	73 7	0.03909	8	7 71	1.06509	92	66 7
1.027	84 8	0.03901	9	8 81	1.06601	91	76 8
1.028	95 9	0.03892	9	9 91	1.06692	91	86 9
1.029		0 03883	8		1.06783	92	
1.030		0.03875	9		1.06875	91	
1.031		0.03866	8		1.06966	92	
1.032		0.03858	9		1.07058	91	
1.033		0.03849	8		1.07149	92	
1.034		0.03841	9		1.07241	91	
1.035		0.03832	8		1.07332	92	
1.036		0.03824	8		1.07424	92	
1.037		0.03816	9		1.07516	91	
1.038		0.03807	8		1.07607	92	
1.039		0.03799	9		1.07699	91	
1.040		0.03790	8		1.07790	92	
1.041		0.03782	8		1.07882	92	
1.042	8	0.03774	9	8	1.07974	91	92
1.043	7 1	0.03765	8	1 11	1.08065	92	6 1
1.044	19 2	0.03757	8	2 23	1.08157	92	18 2
	32 3			3 34			29 3
1.045	44 4	0.03749	8	4 46	1.08249	92	41 4
1.046	57 5	0 03741	9	5 57	1.08341	91	52 5
1.047	69 6	0 03732	8	6 69	1.08432	92	64 6
1.048	82 7	0.03724	8	7 80	1.08524	92	75 7
1.049	94 8	0.03716	8	8 92	1.08616	92	87 8
1.050		0.03708	8		1.08708	92	
1.051		0.03700	9		1.08800	91	
1.052		0 03691	8		1.08891	92	
1.053		0.03683	8		1.08983	92	
1.054		0.03675	8		1.09075	92	
1.055		0.03667	8		1.09167	92	
1.056		0 03659	8		1.09259	92	
1.057		0.03651	8		1.09351	92	
1.058		0.03643	8		1.09443	92	
1.059		0 03635	8		1.09535	92	
1.060		0.03627	8		1.09627	92	
1.061		0.03619	8		1.09719	92	
1.062	7	0.03611	8	7	1.09811	92	93
1.063	8 1	0.03603	8	1 13	1.09903	92	7 1
1.064	22 2	0.03595	8	2 27	1.09995	92	20 2
	36 3			3 40			34 3
1.065	51 4	0.03587	8	4 53	1.10087	92	47 4
1.066	65 5	0.03579	8	5 66	1.10179	92	60 5
1.067	79 6	0 03571	8	6 80	1.10271	92	74 6
1.068	93 7	0.03563	8	7 93	1.10363	92	87 7
1.069		0.03555	7		1.10455	93	
1.070		0 03548	8		1.10548	92	
1.071		0.03540	8		1.10640	92	
1.072		0.03532	8		1.10732	92	
1.073		0.03524	8		1.10824	92	
1.074		0.03516	7		1.10916	93	
1.075		0.03509	8		1.11009	92	
1.076		0.03501	8		1.11101	92	
1.077		0.03493	8		1.11193	92	
1.078		0.03485	7		1.11285	93	
1.079		0.03478	8		1.11378	92	
1.080		0.03470			1.11470		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
1.080	8	0,03470	8	8	1.11470	92	92	1.140	7	0.03037	6	7	1.17037	94	93
1.081	7 | 1	0.03462	7	1 | 11	1.11562	93	6 | 1	1.141	8 | 1	0.03031	7	1 | 13	1.17131	93	7 | 1
1.082	19 | 2	0.03455	8	2 | 23	1.11655	92	18 | 2	1.142	22 | 2	0.03024	7	2 | 27	1.17224	93	20 | 2
1.083	32 | 3	0.03447	8	3 | 34	1.11747	92	29 | 3	1.143	36 | 3	0.03017	6	3 | 40	1.17317	94	34 | 3
1.084	44 | 4	0.03439	7	4 | 46	1.11839	93	41 | 4	1.144	51 | 4	0.03011	7	4 | 53	1.17411	93	47 | 4
1.085	57 | 5	0.03432	8	5 | 57	1.11932	92	52 | 5	1.145	65 | 5	0.03004	7	5 | 66	1.17504	93	60 | 5
1.086	69 | 6	0.03424	7	6 | 69	1.12024	93	64 | 6	1.146	79 | 6	0.02997	6	6 | 80	1.17597	94	74 | 6
1.087	82 | 7	0.03417	8	7 | 80	1.12117	92	75 | 7	1.147	93 | 7	0.02991	7	7 | 93	1.17691	93	87 | 7
1.088	94 | 8	0.03409	8	8 | 92	1.12209	92	87 | 8	1.148		0.02984	7		1.17784	93	
1.089		0.03401	7		1.12301	93		1.149		0 02977	6		1.17877	94	
1.090		0.03394	8		1.12394	92		1.150		0.02971	7		1.17971	93	
1.091		0.03386	7		1.12486	93		1.151		0.02964	7		1.18064	93	
1.092		0.03379	8		1.12579	92		1.152		0.02957	6		1.18157	94	
1.093		0.03371	7		1.12671	93		1.153		0.02951	7		1.18251	93	
1.094		0.03364	7		1.12764	93		1.154		0.02944	6		1.18344	94	
1.095		0.03357	8		1.12857	92		1.155		0.02938	7		1.18438	93	
1.096		0.03349	7		1.12949	93		1.156		0.02931	6		1.18531	94	
1.097		0.03342	8		1.13042	92		1.157		0.02925	7		1.18625	93	
1.098		0.03334	7		1.13134	93		1 158		0.02918	6		1.18718	94	
1.099		0.03327	7		1.13227	93		1.159		0.02912	7		1.18812	93	
1.100		0.03320	8		1.13320	92		1.160		0.02905	6		1.18905	94	
1.101		0.03312	7		1.13412	93		1.161		0.02899	7		1.18999	93	
1.102	7	0.03305	7	7	1.13505	93	93	1.162	6	0.02892	6	6	1.19092	94	94
1.103	8 | 1	0.03298	8	1 | 13	1.13598	92	7 | 1	1.163	9 | 1	0.02886	7	1 | 16	1.19186	93	8 | 1
1.104	22 | 2	0.03290	7	2 | 27	1.13690	93	20 | 2	1.164	26 | 2	0.02879	6	2 | 31	1.19279	94	24 | 2
	36 | 3			3 | 40			34 | 3		42 | 3			3 | 47			40 | 3
1.105	51 | 4	0.03283	7	4 | 53	1.13783	93	47 | 4	1.165	59 | 4	0.02873	6	4 | 63	1.19373	94	55 | 4
1.106	65 | 5	0.03276	8	5 | 66	1.13876	92	60 | 5	1.166	76 | 5	0.02867	7	5 | 78	1.19467	93	71 | 5
1.107	79 | 6	0.03268	7	6 | 80	1.13968	93	74 | 6	1.167	92 | 6	0.02860	6	6 | 94	1.19560	94	87 | 6
1.108	93 | 7	0.03261	7	7 | 93	1.14061	93	87 | 7	1.168		0.02854	6		1.19654	94	
1.109		0.03254	7		1.14154	93		1.169		0.02848	7		1.19748	93	
1.110		0.03247	7		1.14247	93		1.170		0 02841	6		1.19841	94	
1.111		0.03240	8		1.14340	92		1.171		0 02835	6		1.19935	94	
1.112		0.03232	7		1.14432	93		1.172		0.02829	7		1.20029	93	
1.113		0.03225	7		1.14525	93		1.173		0.02822	6		1.20122	94	
1.114		0.03218	7		1.14618	93		1.174		0 02816	6		1.20216	94	
1.115		0.03211	7		1.14711	93		1.175		0.02810	7		1.20310	93	
1.116		0.03204	7		1.14804	93		1.176		0.02803	6		1.20403	94	
1.117		0.03197	7		1.14897	93		1.177		0.02797	6		1.20497	94	
1.118		0.03190	7		1.14990	93		1.178		0.02791	6		1.20591	94	
1.119		0.03183	8		1.15083	92		1.179		0.02785	6		1.20685	94	
1.120		0.03175	7		1.15175	93		1.180		0.02779	7		1.20779	93	
1.121		0.03168	7		1.15268	93		1.181		0.02772	6		1.20872	94	
1.122	6	0.03161	7	6	1.15361	93	94	1.182	5	0.02766	6	5	1.20966	94	95
1.123	9 | 1	0.03154	7	1 | 16	1.15454	93	8 | 1	1.183	11 | 1	0.02760	6	1 | 19	1.21060	94	10 | 1
1.124	26 | 2	0.03147	7	2 | 31	1.15547	93	24 | 2	1.184	31 | 2	0.02754	6	2 | 38	1.21154	94	29 | 2
	42 | 3			3 | 47			40 | 3		51 | 3			3 | 57			48 | 3
1.125	59 | 4	0.03140	7	4 | 63	1.15640	93	55 | 4	1.185	71 | 4	0 02748	6	4 | 76	1.21248	94	67 | 4
1.126	76 | 5	0.03133	7	5 | 78	1.15733	93	71 | 5	1.186	91 | 5	0.02742	7	5 | 95	1.21342	93	86 | 5
1.127	92 | 6	0.03126	6	6 | 94	1.15826	94	87 | 6	1.187		0.02735	6		1.21435	94	
1.128		0.03120	7		1.15920	93		1.188		0.02729	6		1.21529	94	
1.129		0.03113	7		1 [illegible]013	93		1.189		0.02723	6		1.21623	94	
1.130		0.03106	7		1.16106	93		1.190		0 02717	6		1.21717	94	
1.131		0.03099	7		1.16199	93		1.191		0.02711	6		1.21811	94	
1.132		0.03092	7		1.16292	93		1.192		0.02705	6		1.21905	94	
1.133		0.03085	7		1.16385	93		1.193		0.02699	6		1.21999	94	
1.134		0.03078	7		1.16478	93		1.194		0.02693	6		1.22093	94	
1.135		0.03071	6		1.16571	94		1.195		0.02687	6		1.22187	94	
1.136		0.03065	7		1.16665	93		1.196		0.02681	6		1.22281	94	
1.137		0.03058	7		1.16758	93		1.197		0.02675	6		1.22375	94	
1.138		0.03051	7		1.16851	93		1.198		0.02669	6		1.22469	94	
1.139		0.03044	7		1.16944	93		1.199		0.02663	6		1.22563	94	
1.140		0.03037			1.17037			1.200		0.02657			1.22657		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
1.200	6	0.02657	6	6	1.22657	94	94	1.260	6	0.02323	5	6	1.28323	95	94
1.201	9 | 1	0.02651	6	1 | 16	1.22751	94	8 | 1	1.261	9 | 1	0.02318	5	1 | 16	1.28418	95	8 | 1
1.202	26 | 2	0.02645	6	2 | 31	1.22845	94	24 | 2	1.262	26 | 2	0.02313	5	2 | 31	1.28513	95	24 | 2
1.203	42 | 3	0.02639	5	3 | 47	1.22939	95	40 | 3	1.263	42 | 3	0.02308	5	3 | 47	1.28608	95	40 | 3
1.204	59 | 4	0.02634	6	4 | 63	1.23034	94	55 | 4	1.264	59 | 4	0.02303	6	4 | 63	1.28703	94	55 | 4
1.205	76 | 5	0.02628	6	5 | 78	1.23128	94	71 | 5	1.265	76 | 5	0.02297	5	5 | 78	1.28797	95	71 | 5
1.206	92 | 6	0.02622	6	6 | 94	1.23222	94	87 | 6	1.266	92 | 6	0.02292	5	6 | 94	1.28892	95	87 | 6
1.207		0.02616	6		1.23316	94		1.267		0.02287	5		1.28987	95	
1.208		0.02610	6		1.23410	94		1.268		0.02282	5		1.29082	95	
1.209		0.02604	5		1.23504	95		1.269		0.02277	5		1.29177	95	
1.210		0.02599	6		1.23599	94		1.270		0.02272	5		1.29272	95	
1.211		0.02593	6		1.23693	94		1.271		0.02267	5		1.29367	95	
1.212		0.02587	6		1.23787	94		1.272		0.02262	5		1.29462	95	
1.213		0.02581	6		1.23881	94		1.273		0.02257	5		1.29557	95	
1.214		0.02575	5		1.23975	95		1.274		0.02252	6		1.29652	94	
1.215		0.02570	6		1.24070	94		1.275		0.02246	5		1.29746	95	
1.216		0.02564	6		1.24164	94		1.276		0.02241	5		1.29841	95	
1.217		0.02558	6		1.24258	94		1.277		0.02236	5		1.29936	95	
1.218		0.02552	5		1.24352	95		1.278		0.02231	5		1.30031	95	
1.219		0.02547	6		1.24447	94		1.279		0.02226	5		1.30126	95	
1.220		0.02541	6		1.24541	94		1.280		0.02221	5		1.30221	95	
1.221		0.02535	5		1.24635	95	95	1.281		0.02216	5		1.30316	95	95
1.222	5	0.02530	6	5	1.24730	94	10 | 1	1.282	5	0.02211	4	5	1.30411	95	10 | 1
1.223	11 | 1	0.02524	6	1 | 19	1.24824	94	29 | 2	1.283	11 | 1	0.02207	5	1 | 19	1.30507	96	29 | 2
1.224	31 | 2	0.02518	5	2 | 38	1.24918	95	48 | 3	1.284	31 | 2	0.02202	5	2 | 38	1.30602	95	48 | 3
1.225	51 | 3	0.02513	6	3 | 57	1.25013	94	67 | 4	1.285	51 | 3	0.02197	5	3 | 57	1.30697	95	67 | 4
1.226	71 | 4	0.02507	5	4 | 76	1.25107	95	86 | 5	1.286	71 | 4	0.02192	5	4 | 76	1.30792	95	86 | 5
1.227	91 | 5	0.02502	6	5 | 95	1.25202	94		1.287	91 | 5	0.02187	5	5 | 95	1.30887	95	
1.228		0.02496	6		1.25296	94		1.288		0.02182	5		1.30982	95	
1.229		0.02490	5		1.25390	95		1.289		0.02177	5		1.31077	95	
1.230		0.02485	6		1.25485	94		1.290		0.02172	5		1.31172	95	
1.231		0.02479	5		1.25579	95		1.291		0.02167	5		1.31267	95	
1.232		0.02474	6		1.25674	94		1.292		0.02162	4		1.31362	96	
1.233		0.02468	5		1.25768	95		1.293		0.02158	5		1.31458	95	
1.234		0.02463	6		1.25863	94		1.294		0.02153	5		1.31553	95	
1.235		0.02457	5		1.25957	95		1.295		0.02148	5		1.31648	95	
1.236		0.02452	6		1.26052	94		1.296		0.02143	5		1.31743	95	
1.237		0.02446	5		1.26146	95		1.297		0.02138	5		1.31838	95	
1.238		0.02441	6		1.26241	94		1.298		0.02133	4		1.31933	96	
1.239		0.02435	5		1.26335	95		1.299		0.02129	5		1.32029	95	
1.240		0.02430	6		1.26430	94		1.300		0.02124	5		1.32124	95	
1.241	4	0.02424	5	4	1.26524	95	96	1.301	4	0.02119	5	4	1.32219	95	96
1.242	13 | 1	0.02419	5	1 | 24	1.26619	95	13 | 1	1.302	13 | 1	0.02114	4	1 | 24	1.32314	96	13 | 1
1.243	38 | 2	0.02414	6	2 | 48	1.26714	94	37 | 2	1.303	38 | 2	0.02110	5	2 | 48	1.32410	95	37 | 2
1.244	63 | 3	0.02408	5	3 | 72	1.26808	95	61 | 3	1.304	63 | 3	0.02105	5	3 | 72	1.32505	95	61 | 3
1.245	88 | 4	0.02403	6	4 | 96	1.26903	94	85 | 4	1.305	88 | 4	0.02100	5	4 | 96	1.32600	95	85 | 4
1.246		0.02397	5		1.26997	95		1.306		0.02095	4		1.32695	96	
1.247		0.02392	5		1.27092	95		1.307		0.02091	5		1.32791	95	
1.248		0.02387	6		1.27187	94		1.308		0.02086	5		1.32886	95	
1.249		0.02381	5		1.27281	95		1.309		0.02081	4		1.32981	96	
1.250		0.02376	5		1.27376	95		1.310		0.02077	5		1.33077	95	
1.251		0.02371	6		1.27471	94		1.311		0.02072	5		1.33172	95	
1.252		0.02365	5		1.27565	95		1.312		0.02067	4		1.33267	96	
1.253		0.02360	5		1.27660	95		1.313		0.02063	5		1.33363	95	
1.254		0.02355	5		1.27755	95		1.314		0.02058	5		1.33458	95	
1.255		0.02350	6		1.27850	94		1.315		0.02053	4		1.33553	96	
1.256		0.02344	5		1.27944	95		1.316		0.02049	5		1.33649	95	
1.257		0.02339	5		1.28039	95		1.317		0.02044	4		1.33744	96	
1.258		0.02334	5		1.28134	95		1.318		0.02040	5		1.33840	95	
1.259		0.02329	6		1.28229	94		1.319		0.02035	5		1.33935	95	
1.260		0.02323			1.28323			1.320		0.02030			1.34030		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
1.320	5	0.02030	4	5	1.34030	96	9 5
1.321	11 | 1	0.02026	5	1 | 19	1.34126	95	10 | 1
1.322	31 | 2	0.02021	4	2 | 38	1.34221	96	29 | 2
1.323	51 | 3	0.02017	5	3 | 57	1.34317	95	48 | 3
1.324	71 | 4	0.02012	4	4 | 76	1.34412	96	67 | 4
1.325	91 | 5	0.02008	5	5 | 95	1.34508	95	86 | 5
1.326		0.02003	4		1.34603	96	
1.327		0.01999	5		1.34699	95	
1.328		0.01994	4		1.34794	96	
1.329		0.01990	5		1.34890	95	
1.330		0.01985	4		1.34985	96	
1.331		0.01981	5		1.35081	95	
1.332		0.01976	4		1.35176	96	
1.333		0.01972	5		1.35272	95	
1.334		0.01967	4		1.35367	96	
1.335		0.01963	4		1.35463	96	
1.336		0.01959	5		1.35559	95	
1.337		0.01954	4		1.35654	96	
1.338		0.01950	5		1 35750	95	
1.339		0.01945	4		1.35845	96	
1.340		0.01941	4		1.35941	96	
1.341		0.01937	5		1.36037	95	
1.342		0.01932	4		1.36132	96	
1.343		0.01928	4		1.36228	96	
1.344		0.01924	5		1.36324	95	
1.345		0.01919	4		1.36419	96	
1.346		0.01915	4		1.36515	96	
1.347		0.01911	5		1.36611	95	
1.348		0.01906	4		1.36706	96	
1.349		0.01902	4		1.36802	96	
1.350		0.01898	4		1.36898	96	
1.351		0.01894	5		1.36994	95	
1.352	4	0.01889	4	4	1.37089	96	9 6
1.353	13 | 1	0.01885	4	1 | 24	1.37185	96	13 | 1
1.354	38 | 2	0.01881	4	2 | 48	1.37281	96	37 | 2
1.355	63 | 3	0.01877	5	3 | 72	1.37377	95	61 | 3
1.356	88 | 4	0.01872	4	4 | 96	1.37472	96	85 | 4
1.357		0.01868	4		1.37568	96	
1.358		0.01864	4		1.37664	96	
1.359		0.01860	4		1.37760	96	
1.360		0.01856	5		1.37856	95	
1.361		0.01851	4		1.37951	96	
1.362		0.01847	4		1.38047	96	
1.363		0.01843	4		1.38143	96	
1.364		0.01839	4		1.38239	96	
1.365		0.01835	4		1.38335	96	
1.366		0.01831	4		1.38431	96	
1.367		0.01827	5		1.38527	95	
1.368		0.01822	4		1.38622	96	
1.369		0.01818	4		1.38718	96	
1.370		0.01814	4		1.38814	96	
1.371		0 01810	4		1.38910	96	
1.372		0.01806	4		1.39006	96	
1.373		0.01802	4		1.39102	96	
1.374		0.01798	4		1.39198	96	
1.375		0.01794	4		1.39294	96	
1.376		0.01790	4		1.39390	96	
1.377		0.01786	4		1.39486	96	
1.378		0.01782	4		1.39582	96	
1.379		0.01778	4		1.39678	96	
1.380		0.01774			1.39774		

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
1.380	4	0.01774	4	4	1.39774	96	9 6
1.381	13 | 1	0.01770	4	1 | 24	1.39870	96	13 | 1
1.382	38 | 2	0.01766	4	2 | 48	1.39966	96	37 | 2
1.383	63 | 3	0.01762	4	3 | 72	1.40062	96	61 | 3
1.384	88 | 4	0.01758	4	4 | 96	1.40158	96	85 | 4
1.385		0.01754	4		1.40254	96	
1.386		0.01750	4		1.40350	96	
1.387		0.01746	4		1.40446	96	
1.388		0.01742	4		1.40542	96	
1.389		0.01738	4		1.40638	96	
1.390		0.01734	4		1 40734	96	
1.391		0.01730	4		1.40830	96	
1.392		0.01726	4		1.40926	96	
1.393		0.01722	3		1.41022	97	
1.394		0.01719	4		1.41119	96	
1.395		0.01715	4		1.41215	96	
1.396		0.01711	4		1.41311	96	
1 397		0.01707	4		1.41407	96	
1.398		0.01703	4		1.41503	96	
1.399		0.01699	4		1.41599	96	
1.400		0.01695	3		1.41695	97	
1.401		0.01692	4		1.41792	96	
1.402		0.01688	4		1.41888	96	
1.403		0.01684	4		1.41984	96	
1.404		0.01680	4		1.42080	96	
1.405		0.01676	3		1.42176	97	
1.406		0.01673	4		1.42273	96	
1.407		0.01669	4		1.42369	96	
1.408		0.01465	4		1.42465	96	
1.409		0.01661	3		1.42561	97	
1.410		0.01658	4		1.42658	96	
1.411		0.01654	4		1.42754	96	
1.412	3	0.01650	4	3	1.42850	96	9 7
1.413	17 | 1	0.01646	3	1 | 32	1.42946	97	17 | 1
1.414	51 | 2	0.01643	4	2 | 65	1.43043	96	49 | 2
1.415	84 | 3	0.01639	4	3 | 97	1.43139	96	81 | 3
1.416		0.01635	3		1.43235	97	
1.417		0.01632	4		1.43332	96	
1.418		0.016-8	4		1.43428	96	
1.419		0.01524	3		1.43524	97	
1.420		0.01621	4		1.43621	96	
1.421		0.01617	4		1.43717	96	
1.422		0.01613	3		1.43813	97	
1.423		0.01610	4		1.43910	96	
1.424		0.01606	4		1.44006	96	
1.425		0.01602	3		1.44102	97	
1.426		0.01599	4		1.44199	96	
1.427		0.01595	4		1.44295	96	
1.428		0.01591	3		1.44391	97	
1.429		0.01588	4		1.44488	96	
1.430		0.01584	3		1.44584	97	
1.431		0.01581	4		1.44681	96	
1.432		0 01577	3		1.44777	97	
1.433		0.01574	4		1.44874	96	
1.434		0.01570	4		1.44970	96	
1.435		0,01566	3		1.45066	97	
1.436		0.01563	4		1.45163	96	
1.437		0,01559	3		1.45259	97	
1.438		0.01556	4		1.45356	96	
1.439		0.01552	3		1.45452	97	
1.440		0.01549			1.45549		

A.	P. P.	B	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
1.440	4	0.01549	4	4	1.45549	96	96	1.500	3	0.01352	3	3	1.51352	97	97
1.441	13 | 1	0.01545	3	1 | 24	1.45645	97	13 | 1	1.501	17 | 1	0.01349	3	1 | 32	1.51449	97	17 | 1
1.442	38 | 2	0.01542	4	2 | 48	1.45742	96	37 | 2	1.502	51 | 2	0.01346	3	2 | 65	1.51546	97	49 | 2
1.443	63 | 3	0.01538	3	3 | 72	1.45838	97	61 | 3	1.503	84 | 3	0.01343	3	3 | 97	1.51643	97	81 | 3
1.444	88 | 4	0.01535	4	4 | 96	1.45935	96	85 | 4	1.504		0.01340	3		1.51740	97	
1.445		0.01531	3		1.46031	97		1.505		0.01337	3		1.51837	97	
1.446		0.01528	3		1.46128	97		1.506		0.01334	3		1.51934	97	
1.447		0 01525	4		1.46225	96		1.507		0.01331	3		1.52031	97	
1.448		0.01521	3		1.46321	97		1.508		0.01328	3		1.52128	97	
1.449		0.01518	4		1.46418	96		1.509		0.01325	3		1.52225	97	
1.450		0 01514	3		1.46514	97		1.510		0.01322	3		1.52322	97	
1.451		0.01511	4		1.46611	96		1.511		0.01319	3		1.52419	97	
1.452		0.01507	3		1.46707	97		1.512		0.01316	3		1.52516	97	
1.453		0.01504	3		1.46804	97		1.513		0.01313	3		1.52613	97	
1.454		0.01501	4		1.46901	96		1.514		0.01310	3		1 52710	97	
1.455		0.01497	3		1.46997	97		1.515		0.01307	3		1.52807	97	
1.456		0.01494	4		1.47094	96		1.516		0.01304	3		1.52904	97	
1.457		0.01490	3		1.47190	97		1.517		0.01301	3		1.53001	97	
1.458		0.01487	3		1.47287	97		1.518		0.01298	3		1.53098	97	
1.459		0.01484	4		1.47384	96		1.519		0.01295	3		1.53195	97	
1.460		0.01480	3		1.47480	97		1.520		0.01292	3		1.53292	97	
1.461		0.01477	3		1.47577	97		1.521		0.01289	3		1.53389	97	
1.462		0.01474	4		1.47674	96		1.522		0.01286	3		1.53486	97	
1.463		0.01470	3		1.47770	97		1.523		0.01283	3		1.53583	97	
1.464		0.01467	3		1.47867	97		1.524		0.01280	2		1.53680	98	
1.465		0.01464	4		1.47964	96		1.525		0.01278	3		1.53778	97	
1.466		0.01460	3		1.48060	97		1.526		0.01275	3		1.53875	97	
1.467		0.01457	3		1.48157	97		1.527		0.01272	3		1.53972	97	
1.468		0.01454	4		1.48254	96		1.528		0.01269	3		1.54069	97	
1.469		0.01450	3		1.48350	97		1.529		0.01266	3		1.54166	97	
1.470		0.01447	3		1.48447	97		1.530		0.01263	3		1.54263	97	
1.471	3	0.01444	3	3	1.48544	97	97	1.531	2	0.01260	3	2	1.54360	97	98
1.472	17 | 1	0.01441	4	1 | 32	1.48641	97	17 | 1	1.532	26 | 1	0.01257	2	1 | 49	1.54457	98	25 | 1
1.473	51 | 2	0.01437	3	2 | 65	1.48737	96	49 | 2	1.533	76 | 2	0.01255	3	1 | 98	1.54555	97	74 | 2
1.474	84 | 3	0.01434	3	3 | 97	1.48834	97	81 | 3	1.534		0.01252	3		1.54652	97	
1.475		0.01431	3		1.48931	97		1.535		0.01249	3		1.54749	97	
1.476		0.01428	4		1.49028	96		1.536		0.01246	3		1.54846	97	
1.477		0 01424	3		1.49124	97		1.537		0.01243	3		1.54943	97	
1.478		0.01421	3		1.49221	97		1.538		0.01240	2		1.55040	98	
1.479		0.01418	3		1.49318	97		1.539		0.01238	3		1.55138	97	
1.480		0.01415	3		1.49415	97		1.540		0.01235	3		1.55235	97	
1.481		0.01412	4		1·49512	96		1.541		0.01232	3		1.55332	97	
1.482		0.01408	3		1.49608	97		1.542		0.01229	3		1.55429	97	
1.483		0.01405	3		1.49705	97		1.543		0.01226	2		1.55526	98	
1.484		0.01402	3		1.49802	97		1.544		0.01224	3		1.55624	97	
1.485		0.01399	3		1.49899	97		1.545		0.01221	3		1.55721	97	
1.486		0.01396	3		1.49996	97		1.546		0.01218	3		1.55818	97	
1.487		0.01393	4		1.50093	96		1.547		0.01215	2		1.55915	98	
1.488		0.01389	3		1.50189	97		1.548		0.01213	3		1.56013	97	
1.489		0.01386	3		1.50286	97		1.549		0 01210	3		1.56110	97	
1.490		0.01383	3		1.50383	97		1.550		0.01207	3		1.56207	97	
1.491		0.01380	3		1.50480	97		1.551		0.01204	2		1.56304	98	
1.492		0.01377	3		1.50577	97		1.552		0.01202	3		1.56402	97	
1.493		0.01374	3		1.50674	97		1.553		0,01199	3		1.56499	97	
1.494		0.01371	3		1.50771	97		1.554		0.01196	3		1.56596	97	
1.495		0.01368	4		1.50868	96		1.555		0.01193	2		1.56693	98	
1.496		0.01364	3		1.50964	97		1.556		0.01191	3		1.56791	97	
1.497		0.01361	3		1.51061	97		1.557		0.01188	3		1.56888	97	
1.498		0.01358	3		1.51158	97		1.558		0.01185	2		1.56985	98	
1.499		0.01355	3		1.51255	97		1.559		0,01183	3		1.57083	97	
1.500		0.01352			1.51352			1.560		0.01180			1.57180		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
1.560	3	0.01180	3	3	1.57180	97	97	1.620	3	0.01030	3	3	1.63030	97	97
1.561	17 | 1	0.01177	3	1 | 32	1.57277	98	17 | 1	1.621	17 | 1	0.01027	2	1 | 32	1.63127	98	17 | 1
1.562	51 | 2	0.01175	2	2 | 65	1.57375	97	49 | 2	1.622	51 | 2	0.01025	3	2 | 65	1.63225	97	49 | 2
1.563	84 | 3	0.01172	3	3 | 97	1.57472	97	81 | 3	1.623	84 | 3	0.01022	2	3 | 97	1.63322	98	81 | 3
1.564		0.01169	2		1.57569	98		1.624		0.01020	2		1.63420	98	
1.565		0.01167	3		1.57667	97		1.625		0.01018	2		1.63518	98	
1.566		0.01164	3		1.57764	97		1 626		0.01016	3		1.63616	97	
1.567		0.01161	2		1.57861	98		1 627		0.01013	2		1.63713	98	
1.568		0.01159	3		1.57959	97		1.628		0.01011	2		1.63811	98	
1.569		0.01156	3		1.58056	97		1.629		0.01009	3		1.63909	97	
1.570		0.01153	2		1.58153	98		1 630		0.01006	2		1.64006	98	
1.571		0.01151	3		1.58251	97		1.631		0.01004	2		1.64104	98	
1.572		0.01148	2		1.58348	98		1.632		0.01002	3		1 64202	97	
1.573		0.01146	3		1.58446	97		1.633		0.00999	2		1.64299	98	
1.574		0.01143	3		1.58543	97		1.634		0.00997	2		1.64397	98	
1.575		0.01140	2		1.58640	98		1.635		0.00995	2		1.64495	98	
1.576		0.01138	3		1.58738	97		1.636		0.00993	3		1.64593	97	
1.577		0.01135	2		1 58835	98		1.637		0.00990	2		1.64690	98	
1.578		0.01133	3		1.58933	97		1.638		0 00988	2		1.64788	98	
1.579		0.01130	2		1.59030	98		1.639		0.00986	2		1.64886	98	
1.580		0.01128	3		1.59128	97		1.640		0.00984	3		1.64984	97	
1.581		0.01125	3		1.59225	97		1.641		0.00981	2		1.65081	98	
1.582		0.01122	2		1.59322	98		1.642		0.00979	2		1.65179	98	
1.583		0.01120	3		1.59420	97		1.643		0.00977	2		1.65277	98	
1.584		0.01117	2		1.59517	98		1.644		0.00975	2		1.65375	98	
1.585		0.01115	3		1.59615	97		1.645		0.00973	3		1.65473	97	
1.586		0.01112	3		1.59712	97		1.646		0.00970	2		1.65570	98	
1.587		0.01110	2		1.59810	98		1.647		0.00968	2		1.65668	98	
1.588		0.01107	3		1.59907	97		1.648		0.00966	2		1.65766	98	
1.589		0.01105	2		1.60005	98		1.649		0.00964	2		1.65864	98	
1.590	2	0.01102	3	2	1.60102	97	98	1.650	2	0.00962	3	2	1.65962	97	98
1.591	26 | 1	0.01100	2	1 | 49	1.60200	98	25 | 1	1.651	26 | 1	0.00959	2	1 | 49	1.66059	98	25 | 1
1.592	76 | 2	0.01097	3	2 | 98	1.60297	97	74 | 2	1.652	76 | 2	0.00957	2	2 | 98	1.66157	98	74 | 2
1.593		0.01095	2		1.60395	98		1.653		0.00955	2		1.66255	98	
1.594		0.01092	3		1.60492	97		1.654		0.00953	2		1.66353	98	
1.595		0.01090	2		1.60590	98		1.655		0.00951	3		1.66451	97	
1.596		0.01087	3		1.60687	97		1.656		0.00948	2		1.66548	98	
1.597		0.01085	3		1.60785	98		1.657		0.00946	2		1.66646	98	
1.598		0.01082	2		1.60882	97		1.658		0 00944	2		1.66744	98	
1.599		0.01080	3		1.60980	98		1.659		0.00942	2		1.66842	98	
1.600		0.01077	2		1.61077	97		1.660		0 00940	2		1.66940	98	
1.601		0.01075	2		1.61175	98		1.661		0.00938	2		1.67038	98	
1.602		0.01073	3		1.61273	98		1.662		0.00936	3		1.67136	97	
1.603		0.01070	2		1.61370	97		1.663		0.00933	2		1.67233	98	
1.604		0.01068	3		1.61468	98		1 664		0.00931	2		1.67331	98	
1.605		0.01065	2		1.61565	97		1.665		0.00929	2		1.67429	98	
1.606		0.01063	3		1.61663	98		1.666		0.00927	2		1.67527	98	
1.607		0.01060	3		1.61760	97		1.667		0.00925	2		1.67625	98	
1.608		0.01058	2		1.61858	98		1.668		0.00923	2		1.67723	98	
1.609		0.01056	3		1.61956	98		1.669		0.00921	2		1.67821	98	
1.610		0.01053	2		1.62053	97		1.670		0.00919	2		1.67919	98	
1.611		0.01051	2		1.62151	98		1.671		0.00917	2		1.68017	98	
1.612		0.01048	3		1.62248	97		1.672		0.00915	3		1.68115	97	
1.613		0.01046	2		1.62346	98		1.673		0.00912	2		1.68212	98	
1.614		0.01044	3		1.62444	98		1.674		0.00910	2		1.68310	98	
1.615		0.01041	2		1.62541	97		1.675		0.00908	2		1.68408	98	
1.616		0.01039	2		1.62639	98		1.676		0.00906	2		1.68506	98	
1.617		0.01037	3		1.62737	98		1.677		0.00904	2		1.68604	98	
1.618		0.01034	2		1.62834	97		1.678		0.00902	2		1.68702	98	
1.619		0.01032	2		1.62932	98		1.679		0.00900	2		1.68800	98	
1.620		0.01030			1.63030			1.680		0.00898			1.68898		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
1.680	2	0.00898	2	2	1.68898	98	98	1.740	2	0.00783	2	2	1.74783	98	98
1.681	26 | 1	0.00896	2	1 |49	1.68996	98	25 | 1	1.741	26 | 1	0.00781	1	1 |49	1.74881	99	25 | 1
1.682	76 | 2	0.00894	2	2 |98	1.69094	98	74 | 2	1.742	76 | 2	0.00780	2	2 |98	1.74980	98	74 | 2
1.683		0.00892	2		1.69192	98		1.743		0.00778	2		1.75078	98	
1.684		0.00890	2		1.69290	98		1.744		0.00776	2		1.75176	98	
1.685		0.00888	2		1.69388	98		1.745		0.00774	1		1.75274	99	
1.686		0.00886	2		1.69486	98		1.746		0.00773	2		1.75373	98	
1.687		0.00884	2		1.69584	98		1.747		0.00771	2		1.75471	98	
1.688		0.00882	2		1.69682	98		1.748		0.00769	2		1.75569	98	
1.689		0.00880	2		1.69780	98		1.749		0.00767	1		1.75667	99	
1.690		0.00878	2		1.69878	98		1.750		0.00766	2		1.75766	98	
1 691		0.00876	2		1.69976	98		1·751		0.00764	2		1.75864	98	
1.692		0.00874	2		1.70074	98		1.752		0.00762	2		1·75962	98	
1.693		0,00872	2		1.70172	98		1.753		0.00760	1		1.76060	99	
1.694		0.00870	2		1.70270	98		1.754		0.00759	2		1.76159	98	
1.695		0.00868	2		1.70368	98		1.755		0.00757	2		1.76257	98	
1.696		0.00866	2		1.70466	98		1.756		0.00755	2		1.76355	98	
1.697		0.00864	2		1.70564	98		1.757		0.00753	1		1.76453	99	
1.698		0.00862	2		1.70662	98		1.758		0.00752	2		1.76552	98	
1.699		0.00860	2		1.70760	98		1.759		0.00750	2		1.76650	98	
1.700		0.00858	2		1.70858	98		1.760		0.00748	1		1.76748	99	
1.701		0.00856	2		1.70956	98		1.761		0.00747	2		1.76847	98	
1.702		0.00854	2		1.71054	98		1.762		0.00745	2		1.76945	98	
1.703		0.00852	2		1.71152	98		1.763		0.00743	2		1.77043	98	
1.704		0.00850	2		1.71250	98		1.764		0.00741	1		1.77141	99	
1.705		0.00848	2		1.71348	98		1.765		0.00740	2		1.77240	98	
1.706		0.00846	2		1.71446	98		1.766		0.00738	2		1.77338	98	
1.707		0.00844	2		1.71544	98		1.767		0.00736	1		1.77436	99	
1.708		0.00842	1		1.71642	99		1.768		0.00735	2		1.77535	98	
1.709	1	0.00841	2	1	1.71741	98	99	1.769	1	0.00733	2	1	1.77633	98	99
1.710	51 | 1	0.00839	2	1 |99	1.71839	98	50 | 1	1.770	51 | 1	0.00731	1	1 |99	1.77731	99	50 | 1
1.711		0.00837	2		1.71937	98		1.771		0.00730	2		1.77830	98	
1.712		0.00835	2		1.72035	98		1.772		0.00728	2		1.77928	98	
1.713		0.00833	2		1.72133	98		1.773		0.00726	1		1.78026	99	
1.714		0.00831	2		1.72231	98		1.774		0.00725	2		1.78125	98	
1.715		0.00829	2		1.72329	98		1.775		0.00723	2		1.78223	98	
1.716		0.00827	2		1.72427	98		1.776		0.00721	1		1.78321	99	
1.717		0.00825	3		1.72525	98		1.777		0.00720	2		1.78420	98	
1.718		0.00823	1		1.72623	99		1.778		0.00718	2		1.78518	98	
1.719		0.00822	2		1.72722	98		1.779		0.00716	1		1.78616	99	
1.720		0.00820	2		1.72820	98		1.780		0.00715	2		1.78715	98	
1.721		0.00818	2		1.72918	98		1·781		0.00713	1		1.78813	99	
1.722		0.00816	2		1.73016	98		1.782		0.00712	2		1.78912	98	
1.723		0.00814	2		1.73114	98		1.783		0.00710	2		1.79010	98	
1.724		0.00812	2		1.73212	98		1.784		0.00708	1		1.79108	99	
1.725		0.00810	1		1.73310	99		1.785		0.00707	2		1.79207	98	
1.726		0.00809	2		1.73409	98		1.786		0.00705	2		1.79305	98	
1.727		0.00807	2		1.73507	98		1.787		0.00703	1		1.79403	99	
1.728		0.00805	2		1.73605	98		1.788		0.00702	2		1.79502	98	
1.729		0.00803	2		1.73703	98		1.789		0.00700	1		1.79600	99	
1.730		0.00801	2		1.73801	98		1.790		0.00699	2		1.79699	98	
1.731		0.00799	1		1.73899	99		1.791		0.00697	1		1.79797	99	
1.732		0.00798	2		1.73998	98		1.792		0.00696	2		1.79896	98	
1.733		0.00796	2		1.74096	98		1.793		0.00694	2		1.79994	98	
1.734		0.00794	2		1.74194	98		1.794		0.00692	1		1.80092	99	
1.735		0.00792	2		1.74292	98		1.795		0.00691	2		1.80191	98	
1.736		0.00790	1		1.74390	99		1.796		0.00689	1		1.80289	99	
1.737		0.00789	2		1.74489	98		1.797		0.00688	2		1.80388	98	
1.738		0.00787	2		1.74587	98		1.798		0.00686	2		1.80486	98	
1.739		0.00785	2		1.74685	98		1.799		0.00684	1		1.80584	99	
1.740		0.00783			1.74783			1.800		0.00683			1.80683		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
1.800	2	0.00683	2	2	1.80683	98	98	1.860	2	0.00595	1	2	1.86595	99	98
1.801	26 | 1	0.00681	1	1 | 49	1.80781	99	25 | 1	1.861	26 | 1	0.00594	1	1 | 49	1.86694	99	25 | 1
1.802	76 | 2	0.00680	2	2 | 98	1.80880	98	74 | 2	1.862	6 | 2	0.00593	2	2 | 98	1.86793	98	74 | 2
1.803		0.00678	1		1.80978	99		1.863		0.00591	1		1.86891	99	
1.804		0.00677	2		1.81077	98		1.864		0.00590	1		1.86990	99	
1.805		0.00675	1		1.81175	99		1.865		0.00589	2		1.87089	98	
1.806		0.00674	2		1.81274	98		1.866		0.00587	1		1.87187	99	
1.807		0.00672	1		1.81372	99		1.867		0.00586	1		1.87286	99	
1.808		0 00671	2		1.81471	98		1.868		0.00585	2		1.87385	98	
1.809		0.00669	2		1.81569	98		1.869		0.00583	1		1.87483	99	
1.810		0.00667	1		1.81667	99		1.870		0.00582	1		1.87582	99	
1.811		0.00666	2		1.81766	98		1.871		0.00581	2		1.87681	98	
1.812		0.00664	1		1.81864	99		1.872		0.00579	1		1.87779	99	
1.813		0.00663	2		1.81963	98		1.873		0.00578	1		1.87878	99	
1 814		0 00661	1		1.82061	99		1.874		0.00577	2		1.87977	98	
1.815		0.00660	2		1.82160	98		1.875		0.00575	1		1.88075	99	
1.816		0.00658	1		1.82258	99		1 876		0.00574	1		1.88174	99	
1 817		0.00657	2		1.82357	98		1.877		0.00573	2		1 88275	98	
1.818		0 00655	1		1.82455	99		1.878		0.00571	1		1.88371	99	
1.819		0.00654	2		1 82554	98		1.879		0.00570	1		1.88470	99	
1.820		0.00652	1		1.82652	99		1.880		0.00569	2		1.88569	98	
1.821		0.00651	2		1.82751	98		1.881		0.00567	1		1.88667	99	
1.822		0.00649	1		1.82849	99		1.882		0.00566	1		1.88766	99	
1.823		0.00648	2		1.82948	98		1·883		0.00565	1		1.88865	99	
1.824		0.00646	1		1.83046	99		1.884		0.00564	2		1.88964	98	
1.825		0.00645	1		1.83145	99		1.885		0.00562	1		1.89062	99	
1.826		0.00644	2		1.83244	98		1.886		0.00561	1		1.89161	99	
1.827		0.00642	1		1.83342	99		1.887		0.00560	2		1.89260	98	
1.828		0.00641	2		1.83441	98		1.888		0.00558	1		1.89358	99	
1.829	1	0.00639	1	1	1.83539	99	99	1.889	1	0.00557	1	1	1.89457	99	99
1.830	51 | 1	0.00638	2	1 | 90	1.83638	98	50 | 1	1.890	51 | 1	0.00556	1	1 | 99	1.89555	99	50 | 1
1.831		0.00636	1		1.83736	99		1.891		0.00555	2		1.89655	98	
1.832		0 00635	2		1.83835	98		1.892		0 00553	1		1 89753	99	
1.833		0.00633	1		1.83933	99		1.893		0.00552	1		1.89852	99	
1.834		0.00632	2		1.84032	98		1.894		0.00551	1		1.89951	99	
1.835		0.00630	1		1.84130	99		1.895		0.00550	2		1.90050	98	
1.836		0 00629	1		1.84229	99		1.896		0.00548	1		1.90148	99	
1.837		0.00628	2		1.84328	98		1.897		0.00547	1		1.90247	99	
1.838		0.00626	1		1.84426	99		1.898		0.00546	1		1.90346	99	
1.839		0.00625	2		1.84525	98		1 899		0.00545	2		1.90445	98	
1.840		0.00623	1		1.84623	99		1.900		0.00543	1		1.90543	99	
1.841		0.00622	2		1.84722	98		1.901		0.00542	1		1.90642	99	
1.842		0.00620	1		1.84820	99		1.902		0.00541	1		1.90741	99	
1.843		0.00619	1		1.84919	99		1.903		0.00540	2		1.90840	98	
1.844		0.00618	2		1.85018	98		1.904		0.00538	1		1.90938	99	
1.845		0.00616	1		1.85116	99		1.905		0.00537	1		1.91037	99	
1.846		0.00615	2		1.85215	98		1.906		0.00536	1		1.91136	99	
1.847		0.00613	1		1.85313	99		1.907		0.00535	2		1.91235	98	
1.848		0.00612	1		1.85412	99		1.908		0.00533	1		1.91333	99	
1.849		0.00611	2		1.85511	98		1.909		0.00532	1		1.91432	99	
1.850		0.00609	1		1.85609	99		1.910		0.00531	1		1.91531	99	
1.851		0.00608	2		1.85708	98		1.911		0.00530	1		1.91630	99	
1.852		0.00606	1		1.85806	99		1.912		0.00529	2		1.91729	98	
1.853		0.00605	1		1.85905	99		1.913		0.00527	1		1.91827	99	
1.854		0.00604	2		1.86004	98		1.914		0.00526	1		1.91926	99	
1.855		0.00602	1		1.86102	99		1.915		0.00525	1		1.92025	99	
1.856		0.00601	2		1.86201	98		1.916		0.00524	1		1.92124	99	
1.857		0.00599	1		1.86299	99		1.917		0.00523	2		1.92223	98	
1.858		0.00598	1		1.86398	99		1.918		0.00521	1		1.92321	99	
1.859		0.00597	2		1.86497	98		1.919		0.00520	1		1.92420	99	
1.860		0.00595			1.86595			1.920		0.00519			1.92519		
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
1.920	2	0.00519		3	1.92519		98
1.921	26 | 1	0 00518	1	1 | 49	1.92618	99	25 | 1
1.922	76 | 2	0.00517	1	2 | 98	1.92717	99	74 | 2
1.923		0.00515	2		1.92815	98	
1.924		0.00514	1		1.92914	99	
1.925		0.00513	1		1.93013	99	
1 926		0.00512	1		1.93112	99	
1.927		0.00511	1		1.93211	99	
1.928		0.00510	1		1.93310	99	
1.929		0.00508	2		1.93408	98	
1.930		0.00507	1		1.93507	99	
1.931		0.00506	1		1.93606	99	
1.932		0.00505	1		1.93705	99	
1.933		0.00504	1		1.93804	99	
1.934		0.00503	1		1.93903	99	
1.935		0.00502	2		1.94002	98	
1.936		0.00500	1		1.94100	99	
1.937		0.00499	1		1.94199	99	
1.938		0.00498	1		1.94298	99	
1.939		0.00497	1		1.94397	99	
1.940		0.00496	1		1.94496	99	
1.941		0.00495	1		1.94595	99	
1.942		0.00494	1		1.94694	98	
1.943		0.00492	2		1.94792	99	
1.944		0.00491	1		1.94891	99	
1.945		0.00490	1		1.94990	99	
1.946		0.00489	1		1.95089	99	
1.947		0.00488	1		1.95188	99	
1.948		0.00487	1		1.95287	99	
1.949	1	0.00486	1	1	1.95386	99	99
1.950	51 | 1	0,00485	2	1 | 99	1.95485	98	50 | 1
1.951		0.00483	1		1.95583	99	
1.952		0.00482	1		1.95682	99	
1.953		0.00481	1		1.95781	99	
1.954		0.00480	1		1.95880	99	
1.955		0.00479	1		1.95979	99	
1.956		0.00478	1		1.96078	99	
1.957		0.00477	1		1.96177	99	
1.958		0.00476	1		1.96276	99	
1.959		0.00475	1		1.96375	99	
1.960		0.00474	1		1.96474	99	
1.961		0.00473	2		1.96573	98	
1.962		0.00471	1		1.96671	99	
1.963		0.00470	1		1.96770	99	
1.964		0.00469	1		1.96869	99	
1.965		0.00468	1		1.96968	99	
1.966		0.00467	1		1.97067	99	
1.967		0.00466	1		1.97166	99	
1.968		0.00465	1		1.97265	99	
1.969		0.00464	1		1.97364	99	
1.970		0.00463	1		1.97463	99	
1.971		0.00462	1		1.97562	99	
1.972		0.00461	1		1.97661	99	
1 973		0.00460	1		1.97760	99	
1.974		0.00459	1		1.97859	99	
1.975		0.00458	1		1.97958	99	
1.976		0.00457	1		1.98057	99	
1.977		0.00456	2		1.98156	98	
1.978		0.00454	1		1.98254	99	
1.979		0.00453	1		1.98353	99	
1.980		0 00452			1.98452		

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
1.980	1	0.00452	1	1	1.98452	99	99
1.981	51 | 1	0.00451	1	1 | 99	1.98551	99	50 | 1
1.982		0.00450	1		1.98650	99	
1.983		0.00449	1		1.98749	99	
1.984		0.00448	1		1.98848	99	
1.985		0.00447	1		1.98947	99	
1.986		0.00446	1		1.99046	99	
1.987		0.00445	1		1.99145	99	
1.988		0.00444	1		1.99244	99	
1.989		0.00443	1		1.99343	99	
1.990		0.00442	1		1.99442	99	
1.991		0.00441	1		1.99541	99	
1.992		0.00440	1		1.99640	99	
1.993		0.00439	1		1.99739	99	
1.994		0.00438	1		1.99838	99	
1.995		0.00437	1		1.99937	99	
1.996		0.00436	1		2.00036	99	
1.997		0.00435	1		2.00135	99	
1.998	10	0 00434	1	10	2.00234	99	990
1.999	51 | 1	0.00433	1	1 | 99	2.00333	99	50 | 1
	151 | 2			2 | 198			149 | 2
2.000	251 | 3	0.00432	10	3 | 297	2.00432	990	248 | 3
2. 01	351 | 4	0.00422	9	4 | 396	2.01422	991	347 | 4
2. 02	451 | 5	0.00413	10	5 | 495	2.02413	990	446 | 5
2. 03	551 | 6	0.00403	9	6 | 594	2.03403	991	545 | 6
2. 04	651 | 7	0 00394	9	7 | 693	2.04394	991	644 | 7
	751 | 8			8 | 792			743 | 8
2. 05	851 | 9	0.00385	8	9 | 891	2.05385	992	842 | 9
2. 06	951 | 10	0.00377	9	10 | 990	2.06377	991	941 | 10
2. 07	9	0.00368	8	9	2.07368	992	991
2. 08	56 | 1	0.00360	8	1 | 110	2.08360	992	56 | 1
2. 09	167 | 2	0.00352	8	2 | 220	2.09352	992	166 | 2
	278 | 3			3 | 330			276 | 3
2. 10	389 | 4	0.00344	8	4 | 440	2.10344	992	386 | 4
2. 11	501 | 5	0.00336	8	5 | 551	2.11336	992	496 | 5
2. 12	612 | 6	0.00328	7	6 | 661	2.12328	993	606 | 6
2. 13	723 | 7	0.00321	8	7 | 771	2.13321	992	716 | 7
2. 14	834 | 8	0.00313	7	8 | 881	2.14313	993	826 | 8
	945 | 9			9 | 991			936 | 9
2. 15	8	0.00306	7	8	2.15306	993	992
2. 16	63 | 1	0.00299	6	1 | 124	2.16299	994	65 | 1
2. 17	188 | 2	0.00293	7	2 | 248	2.17293	993	187 | 2
2. 18	313 | 3	0.00286	6	3 | 372	2.18286	994	311 | 3
2. 19	438 | 4	0.00280	7	4 | 496	2.19280	993	435 | 4
	563 | 5			5 | 620			559 | 5
2. 20	688 | 6	0.00273	6	6 | 744	2.20273	994	683 | 6
2. 21	813 | 7	0.00267	6	7 | 868	2.21267	994	807 | 7
2. 22	938 | 8	0.00261	6	8 | 992	2.22261	994	931 | 8
2. 23	7	0.00255	6	7	2.23255	994	995
2. 24	72 | 1	0.00249	5	1 | 142	2.24249	995	71 | 1
	215 | 2			2 | 284			215 | 2
2. 25	358 | 3	0.00244	6	3 | 426	2.25244	994	355 | 3
2. 26	501 | 4	0.00238	6	4 | 567	2.26238	995	497 | 4
2. 27	643 | 5	0.00233	5	5 | 709	2.27233	994	639 | 5
2. 28	786 | 6	0.00227	6	6 | 851	2.28227	995	781 | 6
2. 29	929 | 7	0.00222	5	7 | 993	2.29222	995	923 | 7
	6			6			994
2. 30	84 | 1	0.00217	5	1 | 166	2.30217	995	83 | 1
2. 31	251 | 2	0.00212	5	2 | 331	2.31212	995	249 | 2
2. 32	417 | 3	0.00207	4	3 | 497	2.32207	996	415 | 3
2. 33	584 | 4	0.00203	5	4 | 663	2.33203	995	580 | 4
2. 34	751 | 5	0.00198	4	5 | 828	2.34198	996	746 | 5
	917 | 6			6 | 994			912 | 6
2. 35	5	0.00194	5	5	2.35194	995	995
2. 36	101 | 1	0.00189	4	1 | 199	2.36189	996	100 | 1
2. 37	301 | 2	0.00185	4	2 | 398	2.37185	996	299 | 2
2. 38	501 | 3	0.00181	4	3 | 597	2 38181	996	498 | 3
2. 39	701 | 4	0.00177	4	4 | 796	2.39177	996	697 | 4
	901 | 5			5 | 995			896 | 5
2. 40	4	0.00173		4	2.40173		996
	126 | 1			1 | 249			125 | 1
	376 | 2			2 | 498			374 | 2
	626 | 3			3 | 747			623 | 3
	876 | 4			4 | 996			872 | 4

A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.
2. 40	4	0.00173	4	4	2.40173	996	996	3. 00	1	0.00043	1	1	3.00043	999	999
2. 41	126 | 1	0.00169	4	1 | 249	2.41169	996	125 1	3. 01	501 | 1	0.00042	1	1 | 999	3.01042	999	500 | 1
2 42	376 | 2	0 00165	4	2 | 498	2.42165	996	374 | 2	3. 02		0 00041	1		3.02041	1000	
2. 43	626 | 3	0 00161	4	3 | 747	2 43161	996	623 3	3. 03		0.00041	0		3 03041	999	
2. 44	874 | 4	0 00157	3	4 | 996	2.4 .157	997	872 | 4	3. 04		0.00040	1		3.04040	999	
2. 45		0 00154	4		2 45154	996		3. 05		0 00039	1		3.05039	999	
2. 46		0.00150	3		2.46150	997		3. 06		0.00038	1		3.06038	999	
2. 47		0 00147	3		2.47147	997		3. 07		0.00037	1		3.07037	999	
2. 48		0 00144	4		2.48144	996		3. 08		0 00036	1		3.08036	999	
2. 49		0.00140	3		2.49140	997		3. 09		0.00035	1		3.09035	999	
2. 50		0.00137	3		2.50137	997		3. 10		0.00034	0		3.10034	1000	
2. 51		0.00134	3		2 51134	997		3. 11		0.00034	1		3.11034	999	
2. 52		0.00131	3		2.52131	997		3 12		0.00033	1		3.12033	999	
2. 53		0 00128	3		2.53128	997		3. 13		0.00032	1		3.13032	999	
2. 54		0.00125	3		2.54125	997		3. 14		0.00031	0		3.14031	1000	
2. 55		0.00122	3	3	2 55122	997	997	3. 15		0.00031	1		3.15031	999	
2. 56	3	0.00119	3	1 | 332	2.56119	998	167 | 1	3. 16		0.00030	1		3.16030	999	
2. 57	167 | 1 501 | 2	0.00117	2	2 | 665	2 57117	997	499 | 2	3. 17		0.00029	0		3.17029	1000	
2. 58	834 | 3	0.00114	3	3 | 997	2.58114	997	831 | 3	3. 18		0.00029	1		3.18029	999	
2. 59		0.00111	2		2.59111	998		3. 19		0.00028	1		3.19028	999	
2 60		0.00109	3		2.60109	997		3. 20		0.00027	0		3.20027	1000	
2. 61		0.00106	2		2.61106	998		3. 21		0.00027	0		3 21027	999	
2. 62		0.00104	2		2.62104	998		3. 22		0.00026	1		3.22026	999	
2. 63		0.00102	3		2 63102	997		3. 23		0 00025	0		3.23025	1000	
2. 64		0.00099	2		2.64099	998		3. 24		0 00025	1		3.24025	999	
2. 65		0 00097	2		2.65097	998		3. 25		0.00024	0		3.25024	1000	
2. 66		0.00095	2		2.66095	998		3. 26		0.00024	0		3.26024	999	
2. 67		0 00093	2		2.67093	998		3. 27		0.00023	1		3.27023	1000	
2. 68		0.00091	2		2 68091	998		3. 28		0.00023	0		3.28023	999	
2. 69		0.00089	2		2.69089	998		3. 29		0.00022	1		3.29022	1000	
2. 70	2	0.00087	2	2	2.70087	998	998	3. 30		0.00022	0		3.30022	999	
2. 71	251 | 1 751 | 2	0.00085	2	1 | 499 2 | 998	2.71085	998	250 | 1 749 | 2	3. 31		0.00021	1		3.31021	1000	
2. 72		0.00083	2		2.72083	998		3. 32		0.00021	0		3.32021	999	
2. 73		0 00081	2		2.73081	998		3. 33		0.00020	1		3 33020	1000	
2. 74		0.00079	2		2.74079	998		3. 34		0.00020	0		3.34020	999	
2 75		0.00077	2		2.75077	998		3. 35		0.00019	1		3.35019	1000	
2. 76		0.00075	1		2.76075	999		3. 36		0.00019	0		3.36019	1000	
2. 77		0.00074	2		2.77074	998		3. 37		0.00019	0		3.37019	999	
2. 78		0.00072	2		2.78072	998		3. 38		0.00018	1		3 38018	1000	
2. 79		0.00070	1		2.79070	999		3. 39		0.00018	0		3.39018	999	
2. 80		0 00069	2		2.80069	998		3. 4	3 1667 | 1	0.00017	1	3 1 | 3332	3 40017	9997	9997 1667 | 1
2. 81		0.00067	1		2.81067	999		3. 5	5001 | 2	0.00014	3	2 | 6665	3.50014	9997	4999 | 2
2. 82		0.00066	2		2 82066	998		3. 6	8334 | 3	0.00011	3	3 | 9997	3.60011	9998	8331 | 3
2. 83		0.00064	1	1	2.83064	999	999	3. 7	2	0.00009	2	2	3.70009	9998	9998
2. 84	1 50 | 11	0.00063	2	1 | 999	2.84063	998	500 | 1	3. 8	2501 | 1 7501 | 2	0.00007	2	1 | 4999 2 | 9998	3 80007	9998	2500 | 1 7499 | 2
2. 85		0.00061	1		2.85061	999		3. 9		0.00005	1	1	3.90005	9999	9999
2. 86		0 00060	1		2.86060	999		4. 0	1 5001 | 1	0.00004	1	1 | 9999	4.00004	9999	5000 | 1
2. 87		0.00059	1		2·87059	999		4. 1		0.00003	1		4.10003	10000	
2. 88		0 00057	2		2.88057	998		4. 2		0.00003	0		4.20003	9999	
2. 89		0 00056	1		2.89056	999		4. 3		0.00002	1		4.30002	10000	
2. 90		0.00055	1		2.90055	999		4. 4		0.00002	0		4.40002	9999	
2. 91		0.00053	2		2.91053	998		4. 5		0.00001	1		4.50001	10000	
2. 92		0 00052	1		2 92052	999		4. 6		0.00001	0		4.60001	10000	
2. 93		0.00051	1		2.93051	999		4. 7		0.00001	0		4.70001	10000	
2. 94		0.00050	1		2.94050	999		4. 8		0.00001	0		4.80001	10000	
2. 95		0.00049	1		2.95049	999		4. 9		0.00001	1		4.90001	9999	
2. 96		0.00048	1		2.96048	999		5. 0		0.00000			5.00000		
2. 97		0.00047	2		2.97047	998									
2. 98		0.00045	1		2 98045	999									
2. 99		0.00044	1		2.99044	999									
3. 00		0.00043			3.00043										
A.	P. P.	B.	d.	P. P.	C.	d.	P. P.	A.	P. P.	B.	d.	P. P.	C.	d.	P. P.

Вспомогательная Таблица для вычисленія Логариѳмовъ.

Число	Бригг: Логариѳ:	Естеств: Логар:
Степени десятич: 10	1,00000 00000 00000 0	2,30258 50929 94045 7
10^2	2,00000 00000 00000 0	4,60517 01859 88091 4
10^3	3,00000 00000 00000 0	6,90775 52789 82137 1
10^4	4,00000 00000 00000 0	9,21034 03719 76182 7
10^5	5,00000 00000 00000 0	11,51292 54649 70228 4
10^6	6,00000 00000 00000 0	13,81551 05579 64274 1
10^7	7,00000 00000 00000 0	16,11809 56509 58319 8
10^8	8,00000 00000 00000 0	18,42068 07439 52365 5
10^9	9,00000 00000 00000 0	20,72326 58369 46411 2
Единицы. 1	0,00000 00000 00000 0	0,00000 00000 00000 0
2	0,30102 99956 63981 2	0,69314 71805 59945 3
3	0,47712 12547 19662 4	1,09861 22886 68109 7
4	0,60205 99913 27962 4	1,38629 43611 19890 6
5	0,69897 00043 36018 8	1,60943 79124 34100 4
6	0,77815 12503 83643 6	1,79175 94692 28055 0
7	0,84509 80400 14256 8	1,94591 01490 55313 3
8	0,90308 99869 91943 6	2,07944 15416 79835 9
9	0,95424 25094 39324 9	2,19722 45773 36219 4
Первая десятич: 1, 1	0,04139 26851 58225 0	0,09531 01798 04324 9
2	0,07918 12460 47624 8	0,18232 15567 93954 6
3	0,11394 33523 06836 8	0,26236 42644 67491 1
4	0,14612 80356 78238 0	0,33647 22366 21212 9
5	0,17609 12590 55681 2	0,40546 51081 08164 4
6	0,20411 99826 55924 8	0,47000 36292 45735 6
7	0,23044 89213 78273 9	0,53062 82510 62170 4
8	0,25527 25051 03306 1	0,58778 66649 02119 0
9	0,27875 36009 52829 0	0,64185 38861 72394 8
Вторая десятич: 1,0 1	0,00432 13737 82642 6	0,00995 03308 53168 1
2	0,00860 01717 61917 6	0,01980 26272 96179 7
3	0,01283 72247 05172 2	0,02955 88022 41544 4
4	0,01703 33392 98780 4	0,03922 07131 53281 3
5	0,02118 92990 69938 1	0,04879 01641 69432 0
6	0,02530 58652 64770 2	0,05826 89081 23975 8
7	0,02938 37776 85209 6	0,06765 86484 73814 8
8	0,03342 37554 86949 7	0,07696 10411 36128 3
9	0,03742 64979 40623 6	0,08617 76962 41052 3
Третья десятич: 1,00 1	0,00043 40774 79318 6	0,00099 95003 33083 5
2	0,00086 77215 31227 9	0,00199 80026 62673 1
3	0,00130 09330 20418 1	0,00299 55089 79798 5
4	0,00173 37128 09000 5	0,00399 20212 69537 5
5	0,00216 60617 56507 7	0,00498 75415 11039 1
6	0,00259 79807 19903 6	0,00598 20716 77547 5
7	0,00302 94705 53618 0	0,00697 56137 36425 2
8	0,00346 05321 09506 5	0,00796 81696 49176 9
9	0,00389 11662 36910 5	0,00895 97413 71471 9
Четвертая десятич: 1,000 1	0,00004 34272 76862 7	0,00009 99950 00333 3
2	0,00008 68502 11649 0	0,00019 99800 02666 3
3	0,00013 02688 05227 1	0,00029 99550 08998 0
4	0,00017 36830 58464 9	0,00039 99200 21326 9
5	0,00021 70929 72230 2	0,00049 98750 41651 0
6	0,00026 04985 47390 3	0,00059 98200 71967 6
7	0,00030 38997 84812 5	0,00069 97551 14273 3
8	0,00034 72966 85363 5	0,00079 96801 70564 3
9	0,00039 06892 49910 1	0,00089 95952 42836 0

Число	Бригг: Логариѳ:	Естеств: Логар:
Пятая десятич: 1,0000 1	0,00000 43429 23104 5	0,00000 99999 50000 3
2	0,00000 86858 02780 3	0,00001 99998 00002 7
3	0,00001 30286 39028 5	0,00002 99995 50009 0
4	0,00001 73714 31849 8	0,00003 99992 00021 3
5	0,00002 17141 81245 2	0,00004 99987 50041 7
6	0,00002 60568 87215 4	0,00105 99982 00072 0
7	0,00003 03995 49761 4	0,00006 99975 50114 3
8	0,00003 47421 68884 0	0,00007 99968 00170 7
9	0,00003 90847 44584 2	0,00008 99959 50243 0
Шестая десятич: 1,00000 1	0,00000 04342 94264 8	0,00000 09999 99500 0
2	0,00000 08685 88095 2	0,00000 19999 98000 0
3	0,00000 13028 81491 4	0,00000 29999 95500 0
4	0,00000 17371 74453 3	0,00000 39999 92000 0
5	0,00000 21714 66980 9	0,00000 49999 87500 0
6	0,00000 26057 59074 2	0,00000 59999 82000 1
7	0,00000 30400 50733 2	0,00000 69999 75500 1
8	0,00000 34743 41957 9	0,00000 79999 68000 2
9	0,00000 39086 32748 3	0,00000 89999 59500 2
Седьмая десятич: 1,000000 1	0,00000 00434 29446 0	0,00000 00999 99995 0
2	0,00000 00868 58887 7	0,00000 01999 99980 0
3	0,00000 01302 88325 0	0,00000 02999 99955 0
4	0,00000 01737 17758 0	0,00000 03999 99920 0
5	0,00000 02171 47186 7	0,00000 04999 99875 0
6	0,00000 02605 76611 0	0,00000 05999 99820 0
7	0,00000 03040 06030 9	0,00000 06999 99755 0
8	0,00000 03474 35446 5	0,00000 07999 99680 0
9	0,00000 03908 64857 8	0,00000 08999 99595 0
Восьмая десятич: 1,0000000 1	0,00000 00043 42944 8	0,00000 00100 00000 0
2	0,00000 00086 85889 6	0,00000 00199 99999 8
3	0,00000 00130 28834 3	0,00000 00299 99999 6
4	0,00000 00173 71778 9	0,00000 00399 99999 2
5	0,00000 00217 14723 6	0,00000 00499 99998 8
6	0,00000 00260 57668 1	0,00000 00599 99998 2
7	0,00000 00304 00612 7	0,00000 00699 99997 6
8	0,00000 00347 43557 2	0,00000 00799 99996 8
9	0,00000 00390 86501 6	0,00000 00899 99996 0
Девятая десятич: 1,00000000 1	0,00000 00004 34294 5	0,00000 00010 00000 0
2	0,00000 00008 68589 0	0,00000 00020 00000 0
3	0,00000 00013 02883 4	0,00000 00030 00000 0
4	0,00000 00017 37177 9	0,00000 00040 00000 0
5	0,00000 00021 71472 4	0,00000 00050 00000 0
6	0,00000 00026 05766 9	0,00000 00060 00000 0
7	0,00000 00030 40061 4	0,00000 00070 00000 0
8	0,00000 00034 74355 8	0,00000 00080 00000 0
9	0,00000 00039 08650 3	0,00000 00090 00000 0
Десятая десятич: 1,000000000 1	0,00000 00000 43429 4	0,00000 00001 00000 0
2	0,00000 00000 66858 9	0,00000 00002 00000 0
3	0,00000 00001 30288 3	0,00000 00003 00000 0
4	0,00000 00001 73717 8	0,00000 00004 00000 0
5	0,00000 00002 17147 2	0,00000 00005 00000 0
6	0,00000 00002 60576 7	0,00000 00006 00000 0
7	0,00000 00003 04006 1	0,00000 00007 00000 0
8	0,00000 00003 47435 6	0,00000 00008 00000 0
9	0,00000 00003 90865 0	0,00000 00009 00000 0

IV.

ТАБЛИЦА

КВАДРАТНЫХЪ ЧИСЕЛЪ

отъ 1 до 1000.

	0.	100.	200.	300.	400.	500.	600.	700.	800.	900.
1	1	10201	40401	90601	160801	251001	361201	491401	641601	811801
2	4	10404	40804	91204	161604	252004	362404	492804	643204	813604
3	9	10609	41209	91809	162409	253009	363609	494209	644809	815409
4	16	10816	41616	92416	163216	254016	364816	495616	646416	817216
5	25	11025	42025	93025	164025	255025	366025	497025	648025	819025
6	36	11236	42436	93636	164836	256036	367236	498436	649636	820836
7	49	11449	42849	94249	165649	257049	368449	499849	651249	822649
8	64	11664	43264	94864	166464	258064	369664	501264	652864	824464
9	81	11881	43681	95481	167281	259081	370881	502681	654481	826281
10	100	12100	44100	96100	168100	260100	372100	504100	656100	828100
11	121	12321	44521	96721	168921	261121	373321	505521	657721	829921
12	144	12544	44944	97344	169744	262144	374544	506944	659344	831744
13	169	12769	45369	97969	170569	263169	375769	508369	660969	833569
14	196	12996	45796	98596	171396	264196	376996	509796	662596	835396
15	225	13225	46225	99225	172225	265225	378225	511225	664225	837225
16	256	13456	46656	99856	173056	266256	379456	512656	665856	839056
17	289	13689	47089	100489	173889	267289	380689	514089	667489	840889
18	324	13924	47524	101124	174724	268324	381924	515524	669124	842724
19	361	14161	47961	101761	175561	269361	383161	516961	670761	844561
20	400	14400	48400	102400	176400	270400	384400	518400	672400	846400
21	441	14641	48841	103041	177241	271441	385641	519841	674041	848241
22	484	14884	49284	103684	178084	272484	386884	521284	675684	850084
23	529	15129	49729	104329	178929	273529	388129	522729	677329	851929
24	576	15376	50176	104976	179776	274576	389376	524176	678976	853776
25	625	15625	50625	105625	180625	275625	390625	525625	680625	855625
26	676	15876	51076	106276	181476	276676	391876	527076	682276	857476
27	729	16129	51529	106929	182329	277729	393129	528529	683929	859329
28	784	16384	51984	107584	183184	278784	394384	529984	685584	861184
29	841	16641	52441	108241	184041	279841	395641	531441	687241	863041
30	900	16900	52900	108900	184900	280900	396900	532900	688900	864900
31	961	17161	53361	109561	185761	281961	398161	534361	690561	866761
32	1024	17424	53824	110224	186624	283024	399424	535824	692224	868624
33	1089	17689	54289	110889	187489	284089	400689	537289	693889	870489
34	1156	17956	54756	111556	188356	285156	401956	538756	695556	872356
35	1225	18225	55225	112225	189225	286225	403225	540225	697225	874225
36	1296	18496	55696	112896	190096	287296	404496	541696	698896	876096
37	1369	18769	56169	113569	190961	288369	405769	543169	700569	877969
38	1444	19044	56644	114244	191844	289444	407044	544644	702244	879844
39	1521	19321	57121	114921	192721	290521	408321	546121	703921	881721
40	1600	19600	57600	115600	193600	291600	409600	547600	705600	883600
41	1681	19881	58081	116281	194481	292681	410881	549081	707281	885481
42	1764	20164	58564	116964	195364	293764	412164	550564	708964	887364
43	1849	20449	59049	117649	196249	294849	413449	552049	710649	889249
44	1936	20736	59536	118336	197136	295936	414736	553536	712336	891136
45	2025	21025	60025	119025	198025	297025	416025	555025	714025	893025
46	2116	21316	60516	119716	198916	298116	417316	556516	715716	894916
47	2209	21609	61009	120409	199809	299209	418609	558009	717409	896809
48	2304	21904	61504	121104	200704	300304	419904	559504	719104	898704
49	2401	22201	62001	121801	201601	301401	421201	561001	720801	900601
50	2500	22500	62500	122500	202500	302500	422500	562500	722500	902500
51	2601	22801	63001	123201	203401	303601	423801	564001	724201	904401
52	2704	23104	63504	123904	204304	304704	425104	565504	725904	906304
53	2809	23409	64009	124609	205209	305809	426409	567009	727609	908209
54	2916	23716	64516	125316	206116	306916	427716	568516	729316	910116
55	3025	24025	65025	126025	207025	308025	429025	570025	731025	912025
56	3136	24336	65536	126736	207936	309136	430336	571536	732736	913936
57	3249	24649	66049	127449	208849	310249	431649	573049	734449	915849
58	3364	24964	66564	128164	209764	311364	432964	574564	736164	917764
59	3481	25281	67081	128881	210681	312481	434281	576081	737881	919681
60	3600	25600	67600	129600	211600	313600	435600	577600	739600	921600

	0.	100.	200.	300.	400.	500.	600.	700.	800.	900.
61	3721	25921	68121	130321	212521	314721	436921	579121	741321	923521
62	3844	26244	68644	131044	213444	315844	438244	580644	743044	925444
63	3969	26569	69169	131769	214369	316969	439569	582169	744769	927369
64	4096	26896	69696	132496	215296	318096	440896	583696	746496	929296
65	4225	27225	70225	133225	216225	319225	442225	585225	748225	931225
66	4356	27556	70756	133956	217156	320356	443556	586756	749956	933156
67	4489	27889	71289	134689	218089	321489	444889	588289	751689	935089
68	4624	28224	71824	135424	219024	322624	446224	589824	753424	937024
69	4761	28561	72361	136161	219961	323761	447561	591361	755161	938961
70	4900	28900	72900	136900	220900	324900	448900	592900	756900	940900
71	5041	29241	73441	137641	221841	326041	450241	594441	758641	942841
72	5184	29584	73984	138384	222784	327184	451584	595984	760384	944784
73	5329	29929	74529	139129	223729	328329	452929	597529	762129	946729
74	5476	30276	75076	139876	224676	329476	454276	599076	763876	948676
75	5625	30625	75625	140625	225625	330625	445625	600625	765625	950625
76	5776	30976	76176	141376	226576	331776	456976	602176	767376	952576
77	5929	31329	76729	142129	227529	332929	458329	603729	769129	954529
78	6084	31684	77284	142884	228484	334084	459684	605284	770884	956484
79	6241	32041	77841	143641	229441	335241	461041	606841	772641	958441
80	6400	32400	78400	144400	230400	336400	462400	608400	774400	960400
81	6561	32761	78961	145161	231361	337561	463761	609961	776161	962361
82	6724	33124	79524	145924	232324	338724	465124	611524	777924	964324
83	6889	33489	80089	146689	233289	339889	466489	613089	779689	966289
84	7056	33856	80656	147456	234256	341056	467856	614656	781456	968256
85	7225	34225	81225	148225	235225	342225	469225	616225	783225	970225
86	7396	34596	81796	148996	236196	343396	470596	617796	784996	972196
87	7569	34969	82369	149769	237169	344569	471969	619369	786769	974169
88	7744	35344	82944	150544	238144	345744	473344	620944	788544	976144
89	7921	35721	83521	151321	239121	346921	474721	622521	790321	978121
90	8100	36100	84100	152100	240100	348100	476100	624100	792100	980100
91	8281	36481	84681	152881	241081	349281	477481	625681	793881	982081
92	8464	36864	85264	153664	242064	350464	478864	627264	795664	984064
93	8649	37249	85849	154449	243049	351649	480249	628849	797449	986049
94	8836	37636	86436	155236	244036	352836	481636	630436	799236	988036
95	9025	38025	87025	156025	245025	354025	483025	632025	801025	980025
96	9216	38416	87616	156816	246016	355216	484416	633616	802816	992016
97	9409	38809	88209	157609	247009	356409	485809	635209	804609	994009
98	9604	39204	88804	158404	248004	357604	487204	636804	806404	996004
99	9801	39601	89401	159201	249001	358801	488601	638401	808201	998001
100	10000	40000	90000	160000	250000	360000	490000	640000	810000	1000000

V.

ТАБЛИЦА

КВАДРАТНЫХЪ КОРНЕЙ

отъ 1 до 1000.

Число.	Квадра. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.
1	1,00000	61	7,81025	121	11,00000	181	13, 45362	241	15, 52417	301	17, 34935	361	19, 00000
2	1,41421	62	7,87401	122	11,04536	182	13, 49074	242	15, 55635	302	17, 37815	362	19, 02630
3	1,73205	63	7,93725	123	11,09054	183	13, 52775	243	15, 58846	303	17, 40690	363	19, 05256
4	2,00000	64	8,00000	124	11,13553	184	13, 56466	244	15, 62050	304	17, 43560	364	19, 07878
5	2,23607	65	8,06226	125	11,18034	185	13, 60147	245	15, 65248	305	17, 46425	365	19, 10497
6	2,44949	66	8,12404	126	11,22497	186	13, 63818	246	15, 68439	306	17, 49286	366	19, 13113
7	2,64575	67	8,18535	127	11,26943	187	13, 67479	247	15, 71623	307	17, 52142	367	19, 15724
8	2,82843	68	8,24621	128	11,31371	188	13, 71131	248	15, 74802	308	17, 54993	368	19, 18333
9	3,00000	69	8,30662	129	11,35782	189	13, 74773	249	15, 77973	309	17, 57840	369	19, 20937
10	3,16228	70	8,36660	130	11,40175	190	13, 78405	250	15, 81139	310	17, 60682	370	19, 23538
11	3,31662	71	8,42615	131	11,44552	191	13, 82027	251	15, 84298	311	17, 63519	371	19, 26136
12	3,46410	72	8,48528	132	11,48913	192	13, 85641	252	15, 87451	312	17, 66352	372	19, 28730
13	3,60555	73	8,54400	133	11,53256	193	13, 89244	253	15, 90597	313	17, 69181	373	19, 31321
14	3,74166	74	8,60233	134	11,57584	194	13, 92839	254	15, 93738	314	17, 72005	374	19, 33908
15	3,87298	75	8,66025	135	11,61895	195	13, 96424	255	15, 96872	315	17, 74824	375	19, 36492
16	4,00000	76	8,71780	136	11,66190	196	14, 00000	256	16, 00000	316	17, 77639	376	19. 39072
17	4,12311	77	8,77496	137	11,70470	197	14, 03567	257	16, 03122	317	17, 80449	377	19, 41649
18	4,24264	78	8,83176	138	11,74734	198	14, 07125	258	16, 06238	318	17, 83255	378	19, 44222
19	4,35890	79	8,88819	139	11,78983	199	14, 10674	259	16, 09348	319	17, 86057	379	19, 46792
20	4,47214	80	8,94427	140	11,83216	200	14, 14214	260	16, 12452	320	17, 88854	380	19, 49359
21	4,58258	81	9,00000	141	11,87434	201	14, 17745	261	16, 15549	321	17, 91647	381	19, 51922
22	4,69042	82	9,05539	142	11,91638	202	14, 21267	262	16, 18641	322	17, 94436	382	19, 54482
23	4,79583	83	9,11045	143	11,95826	203	14, 24781	263	16, 21727	323	17, 97220	383	19, 57039
24	4,89898	84	9,16515	144	12,00000	204	14. 28286	264	16, 24808	324	18, 00000	384	19, 59592
25	5,00000	85	9,21954	145	12,04159	205	14, 31782	265	16, 27882	325	18, 02776	385	19, 62142
26	5,09902	86	9,27362	146	12,08305	206	14, 35270	266	16, 30951	326	18, 05547	386	19, 64688
27	5,19615	87	9,32738	147	12,12436	207	14, 38749	267	16, 34013	327	18, 08314	387	19, 67232
28	5,29150	88	9,38083	148	12,16553	208	14, 42221	268	16, 37071	328	18, 11077	388	19, 69772
29	5,38516	89	9,43398	149	12,20656	209	14, 45683	269	16, 40122	329	18, 13836	389	19, 72308
30	5,47723	90	9,48683	150	12,24745	210	14, 49138	270	16, 43168	330	18, 16590	390	19, 74842
31	5,56776	91	9,53939	151	12,28821	211	14, 52584	271	16, 46208	331	18, 19341	391	19, 77372
32	5,65685	92	9,59166	152	12,32883	212	14, 56022	272	16, 49242	332	18, 22087	392	19, 79899
33	5,74456	93	9,64365	153	12,36932	213	14, 59452	273	16, 52271	333	18, 24829	393	19, 82423
34	5,83095	94	9,69536	154	12,40967	214	14, 62874	274	16, 55295	334	18, 27567	394	19, 84943
35	5,91608	95	9,74679	155	12,44990	215	14, 66288	275	16, 58312	335	18, 30301	395	19, 87461
36	6,00000	96	9,79796	156	12,49000	216	14, 69694	276	16, 61325	336	18, 33030	396	19, 89975
37	6,08276	97	9,84886	157	12. 52996	217	14, 73092	277	16, 64332	337	18, 35756	397	19, 92486
38	6,16441	98	9,89949	158	12, 56981	218	14, 76482	278	16, 67333	338	18, 38478	398	19, 94994
39	6,24500	99	9,94987	159	12, 60952	219	14, 79865	279	16, 70329	339	18, 41195	399	19, 97498
40	6,32456	100	10,00000	160	12, 64911	220	14, 83240	280	16, 73320	340	18, 43909	400	20, 00000
41	6,40312	101	10,04988	161	12, 68858	221	14, 86607	281	16, 76305	341	18, 46619	401	20, 02498
42	6,48074	102	10,09950	162	12, 72792	222	14, 89966	282	16, 79286	342	18, 49324	402	20, 04994
43	6,55741	103	10,14889	163	12, 76715	223	14, 93318	283	16, 82260	343	18, 52026	403	20, 07486
44	6,63324	104	10,19804	164	12, 80625	224	14, 96663	284	16, 85230	344	18, 54724	404	20, 09975
45	6,70820	105	10,24695	165	12, 84523	225	15, 00000	285	16, 88194	345	18, 57418	405	20, 12461
46	6,78233	106	10,29563	166	12, 88410	226	15, 03330	286	16, 91153	346	18, 60108	406	20, 14944
47	6,85565	107	10,34408	167	12, 92285	227	15, 06652	287	16, 94107	347	18, 62794	407	20, 17424
48	6,92820	108	10,39230	168	12, 96148	228	15, 09967	288	16, 97056	348	18, 65476	408	20, 19901
49	7,00000	109	10,44031	169	13,00000	229	15, 13275	289	17, 00000	349	18, 68154	409	20, 22375
50	7,07107	110	10,48809	170	13, 03840	230	15, 16575	290	17, 02939	350	18, 70829	410	20, 24846
51	7,14143	111	10,53565	171	13, 07670	231	15, 19868	291	17, 05872	351	18, 73499	411	20, 27313
52	7,21110	112	10,58301	172	13, 11488	232	15, 23155	292	17, 08801	352	18, 76166	412	20, 29778
53	7,28011	113	10,63015	173	13, 15295	233	15, 26434	293	17, 11724	353	18, 78829	413	20, 32240
54	7,34847	114	10,67708	174	13, 19091	234	15, 29706	294	17, 14643	354	18, 81489	414	20, 34699
55	7,41620	115	10,72381	175	13, 22876	235	15, 32971	295	17, 17556	355	18, 84144	415	20, 37155
56	7,48331	116	10,77033	176	13, 26650	236	15, 36229	296	17, 20465	356	18, 86796	416	20, 39608
57	7,54983	117	10,81665	177	13, 30413	237	15, 39480	297	17, 23369	357	18, 89444	417	20, 42058
58	7,61577	118	10,86278	178	13, 34166	238	15, 42725	298	17, 26268	358	18, 92089	418	20, 44505
59	7,68115	119	10,90871	179	13, 37909	239	15, 45962	299	17, 29162	359	18, 94730	419	20, 46949
60	7,74597	120	10,95445	180	13, 41641	240	15, 49193	300	17, 32051	360	18, 97367	420	20, 49390

Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.
421	20,51828	481	21, 93171	541	23, 25941	601	24, 51530	661	25, 70992	721	26,85144	781	27,94638
422	20,54264	482	21, 95450	542	23, 28089	602	24, 53569	662	25, 72936	722	26,87006	782	27,96426
423	20,56696	483	21, 97726	543	23, 30236	603	24, 55606	663	25, 74879	723	26,88866	783	27,98214
424	20,59126	484	22, 00000	544	23, 32381	604	24, 57641	664	25, 76820	724	26,90725	784	28,00000
425	20,61553	485	22, 02272	545	23, 34524	605	24, 59675	665	25, 78759	725	26,92582	785	28,01785
426	20,63977	486	22, 04541	546	23, 36664	606	24, 61707	666	25, 80698	726	26,94439	786	28,03569
427	20,66398	487	22, 06808	547	23, 38803	607	24, 63737	667	25, 82634	727	26,96294	787	28,05352
428	20,68816	488	22, 09072	548	23, 40940	608	24, 65766	668	25, 84570	728	26,98148	788	28,07134
429	20,71232	489	22, 11334	549	23, 43075	609	24, 67793	669	25, 86503	729	27,00000	789	28,08914
430	20,73644	490	22, 13594	550	23, 45208	610	24, 69818	670	25, 88436	730	27,01851	790	28,10694
431	20,76054	491	22, 15852	551	23, 47339	611	24, 71841	671	25, 90367	731	27,03701	791	28,12472
432	20,78461	492	22, 18107	552	23, 49468	612	24, 73863	672	25, 92296	732	27,05550	792	28,14249
433	20,80865	493	22, 20360	553	23, 51595	613	24, 75884	673	25, 94224	733	27,07397	793	28,16026
434	20,83267	494	22, 22611	554	23, 53720	614	24, 77902	674	25, 96151	734	27,09243	794	28,17801
435	20,85665	495	22, 24860	555	23, 55844	615	24, 79919	675	25, 98076	735	27,11088	795	28,19574
436	20,88061	496	22, 27106	556	23, 57965	616	24, 81935	676	26, 00000	736	27,12932	796	28,21347
437	20,90455	497	22, 29350	557	23, 60085	617	24, 83948	677	26, 01922	737	27,14774	797	28,23119
438	20,92845	498	22, 31591	558	23, 62202	618	24, 85961	678	26, 03843	738	27,16616	798	28,24889
439	20,95233	499	22, 33831	559	23, 64318	619	24, 87971	679	26, 05763	739	27,18455	799	28,26659
440	20,97618	500	22, 36068	560	23, 66432	620	24, 89980	680	26, 07681	740	27,20294	800	28,28427
441	21,00000	501	22, 38303	561	23, 68544	621	24, 91987	681	26, 09598	741	27,22132	801	28,30194
442	21,02380	502	22, 40536	562	23, 70654	622	24, 93993	682	26, 11513	742	27,23968	802	28,31960
443	21,04757	503	22, 42766	563	23, 72762	623	24, 95997	683	26, 13427	743	27,25803	803	28,33725
444	21,07131	504	22, 44994	564	23, 74868	624	24, 97999	684	26, 15339	744	27,27636	804	28,35489
445	21,09502	505	22, 47221	565	23, 76973	625	25, 00000	685	26, 17250	745	27,29469	805	28,37252
446	21,11871	506	22, 49444	566	23, 79075	626	25, 01999	686	26, 19160	746	27,31300	806	28,39014
447	21,14237	507	22, 51666	567	23, 81176	627	25, 03997	687	26, 21068	747	27,33130	807	28,40775
448	21,16601	508	22, 53886	568	23, 83275	628	25, 05993	688	26, 22975	748	27,34959	808	28,42534
449	21,18962	509	22, 56103	569	23, 85372	629	25, 07987	689	26, 24881	749	27,36786	809	28,44293
450	21,21320	510	22, 58318	570	23, 87467	630	25, 09980	690	26, 26785	750	27,38613	810	28,46050
451	21,23676	511	22, 60531	571	23, 89561	631	25, 11971	691	26, 28688	751	27,40438	811	28,47806
452	21,26029	512	22, 62742	572	23, 91652	632	25, 13961	692	26, 30589	752	27,42262	812	28,49561
453	21,28380	513	22, 64950	573	23, 93742	633	25, 15949	693	26, 32489	753	27,44085	813	28,51315
454	21,30728	514	22, 67157	574	23, 95830	634	25, 17936	694	26, 34388	754	27,45906	814	28,53068
455	21,33073	515	22, 69361	575	23, 97916	635	25, 19921	695	26, 36285	755	27,47726	815	28,54820
456	21,35416	516	22, 71563	576	24, 00000	636	25, 21904	696	26, 38181	756	27,49545	816	28,56571
457	21,37756	517	22, 73763	577	24, 02082	637	25, 23886	697	26, 40076	757	27,51363	817	28,58321
458	21,40093	518	22, 75961	578	24, 04163	638	25, 25866	698	26, 41969	758	27,53180	818	28,60070
459	21,42429	519	22, 78157	579	24, 06242	639	25, 27845	699	26, 43861	759	27,54995	819	28,61818
460	21,44761	520	22, 80351	580	24, 08319	640	25, 29822	700	26, 45751	760	27,56810	820	28,63564
461	21,47091	521	22, 82542	581	24, 10394	641	25, 31798	701	26, 47640	761	27,58623	821	28,65310
462	21,49419	522	22, 84732	582	24, 12468	642	25, 33772	702	26, 49528	762	27,60435	822	28,67054
463	21,51743	523	22, 86919	583	24, 14539	643	25, 35745	703	26, 51415	763	27,62245	823	28,68798
464	21,54066	524	22, 89105	584	24, 16609	644	25, 37716	704	26, 53300	764	27,64055	824	28,70540
465	21,56386	525	22, 91288	585	24, 18677	645	25, 39685	705	26, 55184	765	27,65863	825	28,72281
466	21,58703	526	22, 93469	586	24, 20744	646	25, 41653	706	26, 57066	766	27,67671	826	28,74022
467	21,61018	527	22, 95648	587	24, 22808	647	25, 43619	707	26, 58947	767	27,69476	827	28,75761
468	21,63331	528	22, 97825	588	24, 24871	648	25, 45584	708	26, 60827	768	27,71281	828	28,77499
469	21,65641	529	23, 00000	589	24, 26932	649	25, 47548	709	26, 62705	769	27,73085	829	28,79236
470	21,67948	530	23, 02173	590	24, 28992	650	25, 49510	710	26, 64583	770	27,74887	830	28,80972
471	21,70253	531	23, 04344	591	24, 31049	651	25, 51470	711	26, 66458	771	27,76689	831	28,82707
472	21,72556	532	23, 06513	592	24, 33105	652	25, 53429	712	26, 68333	772	27,78489	832	28,84441
473	21,74856	533	23, 08679	593	24, 35159	653	25, 55386	713	26, 70206	773	27,80288	833	28,86174
474	21,77154	534	23, 10844	594	24, 37212	654	25, 57342	714	26, 72078	774	27,82086	834	28,87906
475	21,79449	535	23, 13007	595	24, 39262	655	25, 59297	715	26, 73948	775	27,83882	835	28,89637
476	21,81742	536	23, 15167	596	24, 41311	656	25, 61250	716	26, 75818	776	27,85678	836	28,91366
477	21,84033	537	23, 17326	597	24, 43358	657	25, 63201	717	26, 77686	777	27,87472	837	28,93095
478	21,86321	538	23, 19483	598	24, 45404	658	25, 65151	718	26, 79552	778	27,89265	838	28,94823
479	21,88607	539	23, 21637	599	24, 47448	659	25, 67100	719	26, 81418	779	27,91057	839	28,96550
480	21,90890	640	23, 23790	600	24, 49490	660	25, 69047	720	26, 83282	780	27,92848	840	28,98275

Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.	Число.	Квадрат. корень.
841	29,00000	866	29,42788	891	29, 84962	916	30, 26549	941	30, 67572	966	31, 08054	991	31, 48015
842	29,01724	867	29,44486	892	29, 86637	917	30, 28201	942	30, 69202	967	31, 09662	992	31, 49603
843	29,03446	868	29,46184	893	29, 88311	918	30, 29851	943	30, 70831	968	31, 11270	993	31, 51190
844	29,05168	869	29,47881	894	29, 89983	919	30, 31501	944	30, 72458	969	31, 12876	994	31, 52777
845	29,06888	870	29,49576	895	29, 91655	920	30, 33150	945	30, 74085	970	31, 14482	995	31, 54362
846	29,08608	871	29,51271	896	29, 93326	921	30, 34798	946	30, 75711	971	31, 16087	996	31, 55947
847	29,10326	872	29,52965	897	29, 94996	922	30, 36445	947	30, 77337	972	31, 17691	997	31, 57531
848	29,12044	873	29,54657	898	29, 96665	923	30, 38092	948	30, 78961	973	31, 19295	998	31, 59114
849	29,13760	874	29,56349	899	29, 98333	924	30, 39737	949	30, 80584	974	31, 20897	999	31, 60696
850	29,15476	875	29,58040	900	30, 00000	925	30, 41381	950	30, 82207	975	31, 22499	1000	31, 62278
851	29,17190	876	29,59730	901	30, 01666	926	30, 43025	951	30, 83829	976	31, 24100		
852	29,18904	877	29,61419	902	30, 03331	927	30, 44667	952	30, 85450	977	31, 25700		
853	29,20616	878	29,63106	903	30, 04996	928	30, 46309	953	30, 87070	978	31, 27299		
854	29,22328	879	29,64793	904	30, 06659	929	30, 47950	954	30, 88689	979	31, 28898		
855	29,24038	880	29,66479	905	30, 08322	930	30, 49590	955	30, 90307	980	31, 30495		
856	29,25748	881	29,68164	906	30, 09983	931	30, 51229	956	30, 91925	981	31, 32092		
857	29,27456	882	29,69848	907	30, 11644	932	30, 52868	957	30, 93542	982	31, 33688		
858	29,29164	883	29,71532	908	30, 13304	933	30, 54505	958	30, 95158	983	31, 35283		
859	29,30870	884	29,73214	909	30, 14963	934	30, 56141	959	30, 96773	984	31, 36877		
860	29,32576	885	29,74895	910	30, 16621	935	30, 57777	960	30, 98387	985	31, 38471		
861	29,34280	886	29,76575	911	30, 18278	936	30, 59412	961	31, 00000	986	31, 40064		
862	29,35984	887	29,78255	912	30, 19934	937	30, 61046	962	31, 01612	987	31, 41656		
863	29,37686	888	29,79933	913	30, 21589	938	30, 62679	963	31, 03224	988	31, 43247		
864	29,39388	889	29,81610	914	30, 13243	939	30, 64311	964	31, 04835	989	31, 44837		
865	29,41088	890	29,83287	915	30, 24897	940	30, 65942	965	31, 06445	990	31, 46427		

VI.

ТАБЛИЦА

КУБИЧНЫХЪ ЧИСЕЛЪ

отъ 1 до 1000.

	0.	100.	200.	300.	400.	500.	600.	700.	800.	900.
1	1	1030301	8120601	27270901	64481201	125751501	217081801	344472101	513922401	731432701
2	8	1061208	8242408	27543608	64964808	126506008	218167208	345948408	515849608	733870808
3	27	1092727	8365427	27818127	65450827	127263527	219256227	347428927	517781627	736314327
4	64	1124864	8489664	28094464	65939264	128024064	220348864	348913664	519718464	738763264
5	125	1157625	8615125	28372625	66430125	128787625	221445125	350402625	521660125	741217625
6	216	1191016	8741816	28652616	66923416	129554216	222545016	351895816	523606616	743677416
7	343	1225043	8869743	28934443	67419143	130323843	223649543	353393243	525557943	746142643
8	512	1259712	8998912	29218112	67917312	131096512	224755712	354894912	527514112	748613312
9	729	1295029	9129329	29503629	68417929	131872229	225866529	356400829	529475129	751089429
10	1000	1331000	9261000	29791000	68921000	132651000	226981000	357911000	531441000	753571000
11	1331	1367631	9393931	30080231	69426531	133432831	228099131	359425431	533411731	756058031
12	1728	1404928	9528128	30371328	69934528	134217728	229220928	360944128	535387328	758550528
13	2197	1442897	9663597	30664297	70444997	135005697	230346397	362467097	537367797	761048497
14	2744	1481544	9800344	30959144	70957944	135796744	231475544	363994344	539353144	763551944
15	3375	1520875	9938375	31255875	71473375	136590875	232608375	365525875	541343375	766060875
16	4096	1560896	10077696	31554496	71991296	137388096	233744896	367061696	543338496	768575296
17	4913	1601613	10218313	31855013	72511713	138188413	234885113	368601813	545338513	771095213
18	5832	1643032	10360232	32157432	73034632	138991832	236029032	370146232	547343432	773620632
19	6859	1685159	10503459	32461759	73560059	139798359	237176659	371694959	549353259	776151559
20	8000	1728000	10648000	32768000	74088000	140608000	238328000	373248000	551368000	778688000
21	9261	1771561	10793861	33076161	74618461	141420761	239483061	374805361	553387661	781229961
22	10648	1815848	10941048	33386248	75151448	142236648	240641848	376367048	555412248	783777448
23	12167	1860867	11089567	33698267	75686967	143055667	241804367	377933067	557441767	786330467
24	13824	1906624	11239424	34012224	76225024	143877824	242970624	379503424	559476224	788889024
25	15625	1953125	11390625	34328125	76765625	144703125	244140625	381078125	561515625	791453125
26	17576	2000376	11543176	34645976	77308776	145531576	245314376	382657176	563559976	794022776
27	19683	2048383	11697083	34965783	77854483	146363183	246491883	384240583	565609283	796597983
28	21952	2097152	11852352	35287552	78402752	147197952	247673152	385828352	567663552	799178752
29	24389	2146689	12008989	35611289	78953589	148035889	248858189	387420489	569722789	801765089
30	27000	2197000	12167000	35937000	79507000	148877000	250047000	389017000	571787000	804357000
31	29791	2248091	12326391	36264691	80062991	149721291	251239591	390617891	573856191	806954491
32	32768	2299968	12487168	36594368	80621568	150568768	252435968	392223168	575930368	809557568
33	35937	2352637	12649337	36926037	81182737	151419437	253636137	393832837	578009537	812166237
34	39304	2406104	12812904	37259704	81746504	152273304	254840104	395446904	580093704	814780504
35	42875	2460375	12977875	37595375	82312875	153130375	256047875	397065375	582182875	817400375
36	46656	2515456	13144256	37933056	82881856	153990656	257259456	398688256	584277056	820025856
37	50653	2571353	13312053	38272753	83453453	154854153	258474853	400315553	586376253	822656953
38	54872	2628072	13481272	38614472	84027672	155720872	259694072	401947272	588480472	825293672
39	59319	2685619	13651919	38958219	84604519	156590819	260917119	403583419	590589719	827936019
40	64000	2744000	13824000	39304000	85184000	157464000	262144000	405224000	592704000	830584000
41	68921	2803221	13997521	39651821	85766121	158340421	263374721	406869021	594823321	833237621
42	74088	2863288	14172488	40001688	86350888	159220088	264609288	408518488	596947688	835896888
43	79507	2924207	14348907	40353607	86938307	160103007	265847707	410172407	599077107	838561807
44	85184	2985984	14526784	40707584	87528384	160989184	267089984	411830784	601211584	841232384
45	91125	3048625	14706125	41063625	88121125	161878625	268336125	413493625	603351125	843908625
46	97336	3112136	14886936	41421736	88716536	162771336	269586136	415160936	605495736	846590536
47	103823	3176523	15069223	41781923	89314623	163667323	270840023	416832723	607645423	849278123
48	110592	3241792	15252992	42144192	89915392	164566592	272097792	418508992	609800192	851971392
49	117649	3307949	15438249	42508549	90518849	165469149	273359449	420189749	611960049	854670349
50	125000	3375000	15625000	42875000	91125000	166375000	274625000	421875000	614125000	857375000
51	132651	3442951	15813251	43243551	91733851	167284151	275894451	423564751	616295051	860085351
52	140608	3511808	16003008	43614208	92345408	168196608	277167808	425259008	618470208	862801408
53	148877	3581577	16194277	43986977	92959677	169112377	278445077	426957777	620650477	865523177
54	157464	3652264	16387064	44361864	93576664	170031464	279726264	428661064	622835864	868250664
55	166375	3723875	16581375	44738875	94196375	170953875	281011375	430368875	625026375	870983875
56	175616	3796416	16777216	45118016	94818816	171879616	282300416	432081216	627222016	873722816
57	185193	3869893	16974593	45499293	95443993	172808693	283593393	433798093	629422793	876467493
58	195112	3944312	17173512	45882712	96071912	173741112	284890312	435519512	631628712	879217912
59	205379	4019679	17373979	46268279	96702579	174676879	286191179	437245479	633839779	881974079
60	216000	4096000	17576000	46656000	97336000	175616000	287496000	438976000	636056000	884736000

	0.	100.	200.	300.	400.	500.	600.	700.	800.	900.
61	226981	4173281	17779581	47045881	97972181	176558481	288804781	440711081	638277381	887503681
62	238328	4251528	17984728	47437928	98611128	177504328	290117528	442450728	640503928	890277128
63	250047	4330747	18191447	47832147	99252847	178453547	291434247	444194947	642735647	893056347
64	262144	4410944	18399744	48228544	99897344	179406144	292754944	445943744	644972544	895841344
65	274625	4492125	18609625	48627125	100544625	180362125	294079625	447697125	647214625	898632125
66	287496	4574296	18821096	49027896	101194696	181321496	295408296	449455096	649461896	901428696
67	300763	4657463	19034163	49430863	101847563	182284263	296740963	451217663	651714363	904231063
68	314432	4741632	19248832	49836032	102503232	183250432	298077632	452984832	653972032	907039232
69	328509	4826809	19465109	50243409	103161709	184220009	299418309	454756609	656234909	909853209
70	343000	4913000	19683000	50653000	103823000	185193000	300763000	456533000	658503000	912673000
71	357911	5000211	19902511	51064811	104487111	186169411	302111711	458314011	660776311	915498611
72	373248	5088448	20123648	51478848	105154048	187149248	303464448	460099648	663054858	918330048
73	389017	5177717	20346417	51895117	105823817	188132517	304821217	461889917	665338617	921167317
74	405224	5268024	20570824	52313624	106496424	189119224	306182024	463684824	667627624	924010424
75	421875	5359375	20796875	52734375	107171875	190109375	307546875	465484375	669921875	926859375
76	438976	5451776	21024576	53157376	107850176	191102976	308915776	467288576	672221376	929714176
77	456533	5545233	21253933	53582633	108531333	192100033	310288733	469097433	674526133	932574833
78	474552	5639752	21484952	54010152	109215352	193100552	311665752	470910952	676836152	935441352
79	493039	5735339	21717639	54439939	109902239	194104539	313046839	472729139	679151439	938313739
80	512000	5832000	21952000	54872000	110592000	195112000	314432000	474552000	681472000	941192000
81	531441	5929741	22188041	55306341	111284641	196122941	315821241	476379541	683797841	944076141
82	551368	6028568	22425768	55742968	111980168	197137368	317214568	478211768	686128968	946966168
83	571787	6128487	22665187	56181887	112678587	198155287	318611987	480048687	688465387	949862087
84	592704	6229504	22906304	56623104	113379904	199176704	320013504	481890304	690807104	952763904
85	614125	6331625	23149125	57066625	114084125	200201625	321419125	483736625	693154125	955671625
86	636056	6434856	23393656	57512456	114791256	201230056	322828856	485587656	695506456	958585256
87	658503	6539203	23639903	57960603	115501303	202262003	324242703	487443403	697864103	961504803
88	681472	6644672	23887872	58411072	116214272	203297472	325660672	489303872	700227072	964430272
89	704969	6751269	24137569	58863869	116930169	204336469	327082769	491169069	702595569	967361669
90	729000	6859000	24389000	59319000	117649000	205379000	328509000	493039090	704969000	970299000
91	753571	6967871	24642171	59776471	118370771	206425071	329939371	494913671	707347971	973242271
92	778688	7077888	24897088	60236288	119095488	207474688	331373888	496793088	709732288	976191488
93	804357	7189057	25153757	60698457	119823157	208527857	332812557	498677257	712121957	979146657
94	830584	7301384	25412184	61162984	120553784	209584584	334255384	500566184	714516984	982107784
95	857375	7414875	25672375	61629875	121287375	210644875	335702375	502459875	716917375	985074875
96	884736	7529536	25934336	62099136	122023936	211708736	337153536	504358336	719323136	988047936
97	912673	7645373	26198073	62570773	122763473	212776173	338608873	506261573	721734273	991026973
98	941192	7762392	26463592	63044792	123505992	213847192	340068392	508169592	724150792	994011992
99	970299	7880599	26730899	63521199	124251499	214921799	341532099	510082399	726572699	997002999
100	1000000	8000000	27000000	64000000	125000000	216000000	343000000	512000000	729000000	1000000000

VII.

ТАБЛИЦА

КУБИЧНЫХЪ КОРНЕЙ

отъ 1 до 100.

x	$\sqrt[3]{x}$	x	$\sqrt[3]{x}$
1	1.0000000	51	3.7084298
2	1.2599210	52	3.7325111
3	1.4422496	53	3.7562858
4	1.5874011	54	3.7797631
5	1.7099759	55	3.8029525
6	1.8171206	56	3.8258624
7	1.9129312	57	3.8485011
8	2.0000000	58	3.8708766
9	2.0800837	59	3.8929965
10	2.1544347	60	3.9148676
11	2.2239801	61	3.9364972
12	2.2894286	62	3.9578915
13	2.3513347	63	3.9790571
14	2.4101422	64	4.0000000
15	2.4662121	65	4.0207256
16	2.5198421	66	4.0412401
17	2.5712816	67	4.0615480
18	2.6207414	68	4.0816551
19	2.6684016	69	4.1015661
20	2.7144177	70	4.1212853
21	2.7589243	71	4.1408178
22	2.8020393	72	4.1601676
23	2.8438670	73	4.1793390
24	2.8844991	74	4.1983364
25	2.9240177	75	4.2171633
26	2.9624960	76	4.2358236
27	3.0000000	77	4.2543210
28	3.0365889	78	4.2726586
29	3.0723168	79	4.2908404
30	3.1072325	80	4.3088695
31	3.1413806	81	4.3267487
32	3.1748021	82	4.3444815
33	3.2075343	83	4.3620707
34	3.2396118	84	4.3795191
35	3.2710663	85	4.3968296
36	3.3019272	86	4.4140049
37	3.3322218	87	4.4310476
38	3.3619754	88	4.4479602
39	3.3912114	89	4.4647451
40	3.4199519	90	4.4814047
41	3.4482172	91	4.4979414
42	3.4760266	92	4.5143574
43	3.5033981	93	4.5306549
44	3.5303483	94	4.5468359
45	3.5568933	95	4.5629026
46	3.5830479	96	4.5788570
47	3.6088261	97	4.5947009
48	3.6342411	98	4.6104363
49	3.6593057	99	4.6260650
50	3.6840314	100	4.6415888

VIII.

ТАБЛИЦА ХОРДЪ

ОТЪ

0° до 90°

ОПЪ 10′ до 10′.

Длина хордъ при радіусѣ = 1000.

Дуга	Хорд.	Дуга	Хорд.	Дуга	Хорд.	Дуга	Хорд.	Дуга	Хорд.	Дуга	Хор.	Дуга	Хор.
0° 0′	0	9° 0′	157	18° 0′	313	27° 0	467	36° 0′	618	45° 0′	765	54° 0′	908
10	3	10	160	10	316	10	470	10	621	10	768	10	911
20	6	20	163	20	319	20	473	20	624	20	771	20	913
30	9	30	166	30	321	30	475	30	626	30	773	30	916
40	12	40	169	40	324	40	478	40	629	40	776	40	918
50	15	50	171	50	327	50	481	50	632	50	779	50	921
1 0	17	10 0	174	19 0	330	28 0	484	37 0	635	46 0	781	55 0	923
10	20	10	177	10	333	10	487	10	637	10	784	10	926
20	23	20	180	20	336	20	489	20	640	20	787	20	929
30	26	30	183	30	339	30	492	30	643	30	789	30	931
40	29	40	186	40	342	40	495	40	646	40	792	40	934
50	32	50	189	50	344	50	498	50	648	50	795	50	936
2 0	35	11 0	192	20 0	347	29 0	501	38 0	651	47 0	797	56 0	939
10	38	10	195	10	350	10	504	10	654	10	800	10	942
20	41	20	197	20	353	20	506	20	657	20	803	20	944
30	44	30	200	30	356	30	509	30	659	30	805	30	947
40	47	40	203	40	359	40	512	40	662	40	808	40	949
50	49	50	206	50	362	50	515	50	665	50	811	50	952
3 0	52	12 0	209	21 0	364	30 0	518	39 0	668	48 0	813	57 0	954
10	55	10	212	10	367	10	520	10	670	10	816	10	957
20	58	20	215	20	370	20	523	20	673	20	819	20	959
30	61	30	218	30	373	30	526	30	676	30	821	30	962
40	64	40	221	40	376	40	529	40	679	40	824	40	965
50	67	50	224	50	379	50	532	50	681	50	827	50	967
4 0	70	13 0	226	22 0	382	31 0	534	40 0	684	49 0	829	58 0	970
10	73	10	229	10	384	10	537	10	687	10	832	10	972
20	76	20	232	20	387	20	540	20	690	20	835	20	975
30	79	30	235	30	390	30	543	30	692	30	837	30	977
40	81	40	238	40	393	40	546	40	695	40	840	40	980
50	84	50	241	50	396	50	548	50	698	50	843	50	982
5 0	87	14 0	244	23 0	399	32 0	551	41 0	700	50 0	845	59 0	985
10	90	10	247	10	402	10	554	10	703	10	848	10	987
20	93	20	250	20	404	20	557	20	706	20	851	20	990
30	96	30	252	30	407	30	560	30	709	30	853	30	992
40	99	40	255	40	410	40	562	40	711	40	856	40	995
50	102	50	258	50	413	50	565	50	714	50	858	50	997
6 0	105	15 0	261	24 0	416	33 0	568	42 0	717	51 0	861	60 0	1000
10	108	10	264	10	419	10	571	10	719	10	864	10	1003
20	110	20	267	20	422	20	574	20	722	20	866	20	1005
30	113	30	270	30	424	30	576	30	725	30	869	30	1008
40	116	40	273	40	427	40	579	40	728	40	872	40	1010
50	119	50	275	50	430	50	582	50	730	50	874	50	1013
7 0	122	16 0	278	25 0	433	34 0	585	43 0	733	52 0	877	61 0	1015
10	125	10	281	10	436	10	588	10	736	10	879	10	1018
20	128	20	284	20	439	20	590	20	738	20	882	20	1020
30	131	30	287	30	441	30	593	30	741	30	885	30	1023
40	134	40	290	40	444	40	596	40	744	40	887	40	1025
50	137	50	293	50	447	50	599	50	747	50	890	50	1028
8 0	140	17 0	296	26 0	450	35 0	601	44 0	749	53 0	892	62 0	1030
10	142	10	298	10	453	10	604	10	752	10	895	10	1033
20	145	20	301	20	456	20	607	20	755	20	898	20	1035
30	148	30	304	30	458	30	610	30	757	30	900	30	1038
40	151	40	307	40	461	40	612	40	760	40	903	40	1040
50	154	50	310	50	464	50	615	50	763	50	905	50	1043
9 0	157	18 0	313	27 0	467	36 0	618	45 0	765	54 0	908	63 0	1045

Длина хордъ при радіусѣ = 1000.

Дуга	Хорд	Дуга	Хорд.	Дуга	Хорд.	Дуга	Хорд.	Дуга	Хорд.	Дуга	Хор.	Дуга	Хор.
63° 0′	1045	67° 0′	1104	71° 0′	1161	75° 0′	1218	79° 0′	1272	83° 0′	1325	87° 0′	1377
10	1047	10	1106	10	1164	10	1220	10	1274	10	1327	10	1379
20	1050	20	1109	20	1166	20	1222	20	1277	20	1330	20	1381
30	1052	30	1111	30	1168	30	1224	30	1279	30	1332	30	1383
40	1055	40	1114	40	1171	40	1227	40	1281	40	1334	40	1385
50	1057	50	1116	50	1173	50	1229	50	1283	50	1336	50	1387
64 0	1060	68 0	1118	72 0	1176	76 0	1231	80 0	1286	84 0	1338	88 0	1389
10	1062	10	1121	10	1178	10	1234	10	1288	10	1340	10	1391
20	1065	20	1123	20	1180	20	1236	20	1290	20	1343	20	1393
30	1067	30	1126	30	1183	30	1238	30	1292	30	1345	30	1396
40	1070	40	1128	40	1185	40	1240	40	1294	40	1347	40	1398
50	1072	50	1130	50	1187	50	1243	50	1297	50	1349	50	1400
65 0	1075	69 0	1133	73 0	1190	77 0	1245	81 0	1299	85 0	1351	89 0	1402
10	1077	10	1135	10	1192	10	1247	10	1301	10	1353	10	1404
20	1080	20	1138	20	1194	20	1250	20	1303	20	1355	20	1406
30	1082	30	1140	30	1197	30	1252	30	1306	30	1358	30	1408
40	1084	40	1142	40	1199	40	1254	40	1308	40	1360	40	1410
50	1087	50	1145	50	1201	50	1256	50	1310	50	1362	50	1412
66 0	1089	70 0	1147	74 0	1204	78 0	1259	82 0	1312	86 0	1364	90 0	1414
10	1092	10	1150	10	1206	10	1261	10	1314	10	1366		
20	1094	20	1152	20	1208	20	1263	20	1317	20	1368		
30	1097	30	1154	30	1211	30	1265	30	1319	30	1370		
40	1099	40	1157	40	1213	40	1268	40	1321	40	1372		
50	1101	50	1159	50	1215	50	1270	50	1323	50	1375		
67 0	1104	71 0	1161	75 0	1218	79 0	1272	83 0	1325	87 0	1377		

IX.

ТАБЛИЦА

НАСТОЯЩИХЪ СИНУСОВЪ,

Тангенсовъ и Секансовъ

отъ 0° до 90° отъ 10′ до 10′.

	Sin	Tang	Sec		Sin	Tang	Sec
0° 0′	0,00000	0,00000	1,00000	9° 0′	0,15643	0,15838	1,01247
10	0291	0291	0000	10	5931	6137	1294
20	0582	0582	0002	20	6218	6435	1342
30	0873	0873	0004	30	6505	6734	1391
40	1164	1164	0007	40	6792	7033	1440
50	1454	1455	0011	50	7078	7333	1491
1. 0	0,01745	0,01746	1,00015	10. 0	0,17365	0,17633	1,01543
10	2036	2037	0021	10	7651	7933	1595
20	2327	2328	0027	20	7938	8233	1649
30	2618	2619	0034	30	8224	8534	1703
40	2909	2910	0042	40	8510	8835	1758
50	3199	3201	0051	50	8795	9136	1815
2. 0	0,03490	0,03492	1,00061	11. 0	0,19081	0,19438	1,01872
10	3781	3783	0072	10	9366	0,19740	1930
20	4071	4075	0083	20	9652	0,20043	1989
30	4362	4366	0095	30	0,19937	0345	2049
40	4653	4658	0108	40	0,20222	0648	2110
50	4943	4949	0122	50	0507	0952	2171
3. 0	0,05234	0,05241	1,00137	12. 0	0,20791	0,21256	1,02234
10	5524	5533	0153	10	1076	1560	2298
20	5815	5824	0170	20	1360	1865	2362
30	6105	6116	0187	30	1644	2170	2428
40	6395	6408	0205	40	1928	2475	2495
50	6685	6700	0224	50	2212	2781	2562
4. 0	0,06976	0,06993	1,00244	13. 0	0,22495	0,23087	1,02630
10	7266	7285	0265	10	2778	3393	2700
20	7556	7576	0287	20	3062	3700	2770
30	7846	7870	0309	30	3345	4008	2842
40	8136	8163	0333	40	3627	4316	2914
50	8426	8456	0357	50	3910	4624	2987
5. 0	0,08716	0,08749	1,00382	14. 0	0,24192	0,24933	1,03061
10	9005	9042	0408	10	4474	5242	3137
20	9295	9335	0435	20	4756	5552	3213
30	9585	9629	0463	30	5038	5862	3290
40	0,09874	0,09923	0491	40	5320	6172	3368
50	0,10164	0,10216	0521	50	5601	6483	3447
6. 0	0,10453	0,10510	1,00551	15. 0	0,25882	0,26795	1,03528
10	0742	0805	0582	10	6163	7107	3609
20	1031	1099	0614	20	6443	7419	3691
30	1320	1394	0647	30	6724	7733	3774
40	1609	1688	0681	40	7004	8046	3858
50	1898	1983	0715	50	7284	8360	3944
7. 0	0,12187	0,12279	1,00751	16. 0	0,27564	0,28675	1,04030
10	2476	2574	0787	10	7843	8990	4117
20	2764	2869	0825	20	8123	9305	4206
30	3053	3165	0863	30	8402	9621	4295
40	3341	3461	0902	40	8680	0,29938	4385
50	3629	3758	0942	50	8959	0,30255	4477
8. 0	0,13917	0,14054	1,00983	17. 0	0,29237	0,30573	1,04569
10	4205	4351	1025	10	9515	0891	4663
20	4493	4648	1067	20	0,29793	1210	4757
30	4781	4945	1111	30	0,30071	1530	4853
40	5069	5243	1155	40	0348	1850	4950
50	5356	5540	1200	50	0625	2170	5047
9. 0	0,15643	0,15838	1,01247	18. 0	0,30902	0,32492	1,05146

	Sin	Tang	Sec		Sin	Tang	Sec
18° 0'	0,30902	0, 32492	1, 05146	27° 0'	0, 45399	0, 50953	1, 12233
10	1178	2814	5246	10	5658	1320	2400
20	1455	3136	5347	20	5917	1688	2568
30	1731	3460	5449	30	6175	2057	2738
40	2006	3783	5552	40	6433	2427	2910
50	2282	4108	5657	50	6690	2798	3083
19. 0	0,32557	0, 34433	1, 05762	28. 0	0, 46947	0, 53171	1, 13257
10	2832	4759	5869	10	7204	3545	3433
20	3106	5085	5976	20	7460	3920	3610
30	3381	5412	6085	30	7716	4296	3789
40	3655	5740	6195	40	7971	4673	3970
50	3929	6068	6306	50	8226	5051	4152
20. 0	0,34202	0, 36397	1, 06418	29. 0	0, 48481	0, 55431	1, 14335
10	4375	6727	6531	10	8735	5812	4521
20	4748	7057	6645	20	8989	6194	4707
30	5021	7389	6761	30	9242	6577	4896
40	5293	7720	6878	40	9495	6962	5085
50	5565	8053	6996	50	0, 49748	7348	5277
21. 0	0,35837	0, 38386	1, 07115	30. 0	0, 50000	0, 57735	1, 15470
10	6108	8721	7235	10	0252	8124	5665
20	6379	9055	7356	20	0503	8513	5861
30	6650	9391	7479	30	0754	8905	6059
40	6921	0, 39728	7602	40	1004	9297	6259
50	7191	0, 40065	7727	50	1254	0, 59691	6460
22. 0	0,37461	0, 40403	1, 07854	31. 0	0, 51504	0, 60086	1, 16668
10	7730	0741	7981	10	1753	0483	6868
20	7999	1081	8109	20	2001	0881	7075
30	8268	1421	8239	30	2250	1280	7283
40	8537	1763	8370	40	2498	1681	7493
50	8805	2105	8503	50	2745	2083	7704
23. 0	0,39073	0, 42448	1, 08636	32. 0	0, 52992	0, 62487	1, 17918
10	9341	2791	8771	10	3238	2892	8133
20	9608	3136	8907	20	3484	3299	8350
30	0,39875	3481	9044	30	3730	3707	8569
40	0,40142	3828	9183	40	3975	4117	8790
50	0408	4175	9323	50	4220	4528	9012
24. 0	0,40674	0, 44523	1, 09464	33. 0	0, 54464	0, 64941	1, 19236
10	0939	4872	9606	10	4708	5355	9463
20	1205	5222	9750	20	4951	5771	9691
30	1469	5573	1, 09895	30	5194	6189	1, 19921
40	1734	5924	1, 10041	40	5436	6608	1, 20152
50	1998	6277	0189	50	5678	7028	0386
25. 0	0,42262	0, 46631	1, 10338	34. 0	0, 55919	0, 67451	1, 20622
10	2525	6985	0488	10	6160	7875	0859
20	2788	7341	0640	20	6401	8301	1099
30	3051	7698	0793	30	6641	8728	1341
40	3314	8055	0947	40	6880	9157	1584
50	3576	8414	1103	50	7119	0, 69588	1830
26. 0	0,43837	0, 48773	1, 11260	35. 0	0, 57358	0, 70021	1, 22078
10	4098	9134	1419	10	7596	0455	2327
20	4359	9496	1579	20	7833	0891	2579
30	4620	0, 49858	1740	30	8070	1329	2833
40	5880	0, 50222	1903	40	8307	1769	3089
50	5140	0587	2067	50	8543	2211	3347
27. 0	0,45399	0, 50953	1, 12233	36. 0	0, 58779	0, 72654	1, 23607

	Sin	Tang	Sec		Sin	Tang	Sec
36° 0′	0,58779	0,72654	1,23607	45° 0′	0,70711	1,00000	1,41421
10	9014	3100	3869	10	0916	0584	1835
20	9248	3547	4134	20	1121	1170	2251
30	9482	3996	4400	30	1325	1761	2672
40	9716	4447	4669	40	1529	2355	3096
50	0,59949	4900	4940	50	1732	2952	3524
37. 0	0,60182	0,75355	1,25214	46. 0	0,71934	1,03553	1,43956
10	0414	5813	5489	10	2136	4158	4391
20	0645	6272	5767	20	2337	4766	4831
30	0876	6733	6047	30	2537	5378	5274
40	1107	7196	6330	40	2737	5994	5721
50	1337	7661	6615	50	2937	6613	6173
38. 0	0,61566	0,78129	1,26902	47. 0	0,73135	1.07237	1,46628
10	1795	8598	7191	10	3333	7864	7087
20	2024	9070	7483	20	3531	8496	7551
30	2252	0,79544	7778	30	3728	9131	8019
40	2479	0,80020	8075	40	3924	1,09770	8491
50	2706	0498	8374	50	4120	1,10414	8967
39. 0	0,62932	0,80978	1,28676	48. 0	0,74315	1,11061	1,49448
10	3158	1461	8980	10	4509	1713	1,49933
20	3383	1946	9287	20	4703	2369	1,50422
30	3608	2434	9597	30	4896	3029	0916
40	3832	2923	1,29909	40	5088	3694	1415
50	4056	3416	1,30223	50	5280	4363	1918
40. 0	0,64279	0,83910	1,30541	49. 0	0,75471	1,15037	1,52425
10	4501	4407	0861	10	5662	5715	2938
20	4723	4906	1183	20	5851	6398	3455
30	4945	5408	1509	30	6041	7085	3977
40	5166	5912	1837	40	6229	7777	4504
50	5386	6419	2168	50	6417	8474	5036
41. 0	0,65606	0,86929	1,32501	50. 0	0,76604	1,19175	1,55572
10	5825	7441	2838	10	6791	1,19882	6114
20	6044	7955	3177	20	6977	1,20593	6661
30	6262	8473	3519	30	7163	1310	7213
40	6480	8992	3864	40	7347	2031	7771
50	6697	0,89515	4212	50	7531	2758	8334
42. 0	0,66913	0,90040	1,34563	51. 0	0,77715	1,23490	1,58902
10	7129	0569	4917	10	7897	4227	1,59475
20	7344	1099	5274	20	8079	4969	1,60054
30	7559	1633	5634	30	8261	5717	0639
40	7773	2170	5997	40	8442	6471	1229
50	7987	2709	6363	50	8622	7230	1825
43. 0	0,68200	0,93252	1,36733	52. 0	0,78801	1,27994	1,62427
10	8412	3797	7105	10	8980	8765	3035
20	8624	4345	7481	20	9158	1,29541	3648
30	8836	4897	7860	30	9335	1,30323	4268
40	9046	5451	8242	40	9512	1111	4894
50	9256	6008	8628	50	9688	1904	5526
44. 0	0,69466	0,96569	1,39016	53. 0	0,79864	1,32705	1,66164
10	9675	7133	9409	10	0,80038	3511	6809
20	0,69883	7700	1,39804	20	0212	4323	7460
30	0,70091	8270	1,40203	30	0386	5142	8117
40	0298	8843	0606	40	0558	5968	8782
50	0505	0,99420	1012	50	0730	6800	1,69452
45. 0	0,70711	1,00000	1,41421	54. 0	0,80902	1,37638	1,70130

	Sin	Tang	Sec		Sin	Tang	Sec
54° 0'	0,80902	1,37638	1,70130	63° 0'	0,89101	1,96261	2,20269
10	1072	8484	0815	10	9232	7681	1535
20	1242	1,39336	1506	20	9363	1,99116	2817
30	1412	1,40195	2205	30	9493	2,00569	4116
40	1580	1061	2911	40	9623	2039	5432
50	1748	1934	3624	50	9752	3526	6766
55. 0	0,81915	1,72815	1,74345	64. 0	0,89879	2,05030	2,28117
10	2082	3703	5073	10	0,90007	6553	2,29487
20	2248	4598	5808	20	0133	8094	2,30875
30	2413	5501	6552	30	0259	2,09654	2282
40	2577	6412	7303	40	0383	2,11234	3708
50	2741	7330	8062	50	0508	2832	5154
56. 0	0,82904	1,48256	1,78829	65. 0	0,90631	2,14451	2,36620
10	3066	1,49190	1,79605	10	0753	6090	8107
20	3228	1,50133	1,80388	20	0875	7749	2,39614
30	3389	1084	1180	30	0996	2,19430	2,41842
40	3549	2043	1981	40	1116	2,21132	2692
50	3708	3010	2790	50	1236	2857	4265
57. 0	0,83867	1,53987	1,83608	66. 0	0,91355	2,24604	2,45859
10	4025	4972	4435	10	1473	6374	7477
20	4183	5966	5271	20	1590	8167	2,49119
30	4339	6969	6116	30	1706	2,29984	2,50784
40	4495	7981	6970	40	1822	2,31826	2474
50	4650	1,59002	7834	50	1936	3693	4190
58. 0	0,84805	1,60034	1,88708	67. 0	0,92051	2,35585	2,55931
10	4959	1074	1,89591	10	2164	7504	7698
20	5112	2125	1,90485	20	2276	2,39449	2,59491
30	5264	3185	1388	30	2388	2,41421	2,61313
40	5416	4256	2302	40	2499	3422	3162
50	5567	5337	3226	50	2609	5451	5040
59. 0	0,85717	1,66428	1,94160	68. 0	0,92718	2,47509	2,66947
10	5866	7530	5106	10	2827	2,49597	2,68884
20	6015	8643	6062	20	2935	2,51715	2,70851
30	6163	1,69766	7029	30	3042	3865	2850
40	6310	1,70901	8008	40	3148	6047	4881
50	6457	2047	1,98998	50	3253	2,58261	6945
60. 0	0,86603	1,73205	2,00000	69. 0	0,93358	2,60509	2,79043
10	6748	4375	1014	10	3462	2791	2,81175
20	6892	5556	2039	20	3565	5109	3342
30	7036	6749	3077	30	3667	7462	5545
40	7178	7955	4128	40	3769	2,69853	2,87785
50	7321	1,79174	5191	50	3869	2,72281	2,90064
61. 0	0,87462	1,80405	2,06267	70. 0	0,93969	2,74748	2,92380
10	7603	1649	7356	10	4068	7255	4737
20	7743	2906	8458	20	4167	2,79802	7135
30	7882	4177	2,09574	30	4264	2,82391	2,99574
40	8020	5462	2,10704	40	4361	5024	3,02057
50	8158	6760	1847	50	4457	2,87700	4584.
62. 0	0,88295	1,88073	2,13005	71. 0	0,94552	2,90421	3,07155
10	8431	1,89400	4178	10	4646	3189	3,09774
20	8566	1,90742	5366	20	4740	6004	3,12440
30	8701	2098	6568	30	4832	2,98869	5155
40	8835	3470	7786	40	4924	3,01783	3,17920
50	8968	4858	2,19020	50	5015	4749	3,20737
63. 0	0,89101	1,96261	2,20269	72. 0	0,95106	3,07768	3,23607

	Sin	Tang	Sec
72° 0′	0,95106	3,07768	3,23607
10	5195	3,10842	3,26532
20	5284	3,13972	3,29512
30	5372	3,17160	3,32551
40	5459	3,20406	3,35649
50	5546	3,23714	3,38808
73. 0	0,95631	3,27085	3,42030
10	5715	3,30521	3,45317
20	5799	3,34023	3,48671
30	5882	3,37594	3,52094
40	5964	3,41236	3,55587
50	6046	3,44951	3,59154
74. 0	0,96126	3,48741	3,62796
10	6206	3,52609	3,66515
20	6285	3,56558	3,70315
30	6363	3,60588	3,74198
40	6440	3,64705	3,78166
50	6517	3,68909	3,82223
75. 0	0,96593	3,73205	3,86370
10	6668	3,77595	3,90613
20	6742	3,82083	3,94952
30	6815	3,86671	3,99393
40	6887	3,91364	4,03938
50	6959	3,96165	4,08591
76. 0	0,97030	4,01078	4,13357
10	7100	4,06107	4,18238
20	7169	4,11256	4,23239
30	7237	4,16530	4,28366
40	7305	4,21933	4,33622
50	7371	4,27471	4,39012
77. 0	0,97437	4,33148	4,44541
10	7502	4,38969	4,50216
20	7566	4,44942	4,56041
30	7630	4,51071	4,62023
40	7692	4,57363	4,68168
50	7754	4,63825	4,74482
78. 0	0,97815	4,70463	4,80973
10	7875	4,77286	4,87649
20	7934	4,84301	4,94517
30	7993	4,91516	5,01585
40	8050	4,98940	5,08863
50	8107	5,06584	5,16359
79. 0	0,98163	5,14455	5,24084
10	8218	5,22567	5,32049
20	8272	5,30928	5,40263
30	8326	5,39552	5,48740
40	8378	5,48451	5,57493
50	8430	5,57638	5,66533
80. 0	0,98481	5,67128	5,75877
10	8531	5,76937	5,85539
20	8580	5,87080	5,95536
30	8629	5,97576	6,05886
40	8676	6,08444	6,16607
50	8723	6,19703	6,27719
81. 0	0,98769	6,31375	6,39245

	Sin	Tang	Sec
81° 0′	0,98769	6,31375	6,39245
10	8814	6,43484	6,51208
20	8858	6,56055	6,63633
30	8902	6,69116	6,76547
40	8944	6,82694	6,89979
50	8986	6,96823	7,03962
82. 0	0,99027	7.11537	7,18530
10	9067	7,26873	7,33719
20	9106	7,42871	7,49571
30	9145	7,59575	7,66130
40	9182	7,77035	7,83443
50	9219	7,95302	8,01565
83. 0	0,99255	8,14435	8,20551
10	9290	8,34496	8,40466
20	9324	8,55555	8,61379
30	9357	8,77689	8,83367
40	9390	9,00983	9,06515
50	9421	9,25530	9,30917
84. 0	0,99452	9,51436	9,56677
10	9482	9,78817	9,83912
20	9511	10,07803	10,12752
30	9540	10,38540	10,43343
40	9567	10,71191	10,75849
50	9594	11,05943	11,10455
85. 0	0,99620	11,43005	11,47371
10	9644	11,82617	11,86837
20	9669	12,25051	12,26125
30	9692	12,70621	12,74550
40	9714	13,19688	13,23472
50	9736	13,72674	13,76312
86. 0	0,99756	14,30067	14,33559
10	9776	14,92442	14,95788
20	9795	15,60478	15,63679
30	9814	16,34986	16,38041
40	9831	17,16934	17,19843
50	9847	18,07498	18,10262
87. 0	0,99863	19,08114	19,10732
10	9878	20,20555	20,23028
20	9892	21,47040	21,49368
30	9905	22,90377	22,92559
40	9917	24,54176	24,56212
50	9929	26,43160	26,45051
88. 0	0,99939	28,63625	28,65371
10	9949	31,24158	31,25758
20	9958	34,36777	34,38232
30	9966	38,18846	38,20155
40	9973	42,96408	42,97571
50	9979	49,10388	49,11406
89. 0	0,99985	57,28996	57,29869
10	9989	68,75009	68,75736
20	9993	85,93979	85,94561
30	9996	114,58865	114,59301
40	9998	171,88540	171,88831
50	1, 0000	343,77371	343,77516
90. 0	1, 0000	∞	∞

ПОГРѢШНОСТИ

Напечатано.		Читай
25° Разн. 25 . .	P.P. 42′ . . 18	17
— ——— —	P.P. 54″ . . 23	22
Sin 41°. 15′. Log. 9. 81883.		9.81882
Разность	{ 15 / 14	{ 14 / 15
21 полулиста стран. 1-я, разн. 42	P.P. 40 . .	55,3	55,2
— ——————— ——— 2-я, разн. 66	P.P. 10 . .	5,1	5,2
22 ——————— ——— 3-я, A =	0.919 . B	0.04949	0.04941
	0.945 . C	0.99166	0.99169
— ——————— ——— 4-я	0.970 . B	0.04422	0.04421
24 ——————— ——— 3-я, разн. 1.	P.P. 1 . . .	90	99
Стран. XIX форм. 4-я строка 1.	Cos C=Cos A. Cos B.		Cos C=—Cos A. Cos B
Стран. XX строка 15-я	Cotg B и Sin c.		Cotg b, Sin C и Cos C.

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